ANNUAL INDEX

References to Technical Papers and Technical Articles Published in Journal of Petroleum Technology and Technical Papers Published in Society of Petroleum Engineers Journal during 1967

A

ACCREDITATION: how it is done and what it accomplishes, (Tech. Art.) JPT Mar., 333

ACQUISITIONS: producing oil properties: tax consequences on investment yardsticks, (Tech. Art.) JPT Dec., 1547

ACTIVATION LOGGING: companion log to neutron lifetime log, (Tech. Art.) JPT Apr., 479

ADAMSON, D. K.: *Case History of a WAAIME Section*, (Tech. Art.) JPT Mar., 363

Petroleum Engineering Enrollments Continue to Climb, (Tech. Art.) JPT Jan., 62

ADDITIVES: hardness reducers: effect on failure characteristics of rock, SPEJ Sept., 295; discussion, 299

polymers: comparison of flooding with waterflooding at Huntington Beach, California, (Tech. Art.) JPT Sept., 1103

AIME: *See* American Institute of Mining, Metallurgical, and Petroleum Engineers

ALASKA: management of the naval petroleum reserves to maintain a potential, (Tech. Art.) JPT Mar., 297

ALGERIA: Hassi Er R'Mel field: gas condensate; prediction of time dependence of well deliverability, SPEJ June, 113

ALLEGHENY FIELD: *See* New York

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS: actions of the board, (Tech. Art.) JPT Apr., 512

actions of the Board of Directors, (Tech. Art.) JPT Aug., 1035

annual meeting offers strong petroleum-mining program, (Tech. Art.) JPT Jan., 66

endowments, image and manpower, (Tech. Art.) JPT Nov., 1475

petroleum recruiting: a story of diminishing reserves, (Tech. Art.) JPT June, 737

president believes minerals are the keystone to the world's economy, (Tech. Art.) JPT Sept., 1184

woman's auxiliary: case history of a new section, (Tech. Art.) JPT Mar., 363

1968 annual meeting attendance, (Tech. Art.) JPT Oct., 1369

AMMONIA: tracer: used in Deerfield, Missouri, pilot test of recovery by steam drive, JPT July, 956

AMOTT, E., et al: *Discussion on Mobility Control With Polymer Solutions*, SPEJ June, 170

ANDERSON, R. O.: *Hydrocarbons and 1980*, (Tech. Art.) JPT Oct., 1325

ANDERSON, T. O. and STAHL, E. J.: *A Study of Induced Fracturing Using an Instrumental Approach*, JPT Feb., 261; discussion, 266

ANDREWS, D. E., et al: *The Prediction of Flow Patterns, Liquid Holdup and Pressure Losses Occurring During Continuous Two-Phase Flow In Horizontal Pipelines*, JPT June, 815

ANDSAGER, R. L. and KNAPP, R. M.: *Acoustic Determination of Liquid Levels in Gas Wells*, (Tech. Art.) JPT May, 601

ANISOTROPIC RESERVOIRS: vertical fractures in matrix: performance, SPEJ June, 221

ANNIS, M. R.: *High-Temperature Flow Properties of Water-Base Drilling Fluids*, JPT Aug., 1074

ANNULUS: geometry: function in displacement mechanics in primary cementing, JPT Feb., 251

AQUIFERS: gas storage fields: calculation of leak location, (Tech. Art.) JPT May, 623

calculation of water displacement by gas in development, SPEJ June, 105

case history of development in a Silurian dolomite at Glasford, Illinois, (Tech. Art.) JPT Sept., 1119

estimating gas-water contacts using shut-in wellhead pressures, (Tech. Art.) JPT July, 877

evaluating a slightly permeable caprock of infinite thickness, JPT July, 949

ARKANSAS: Wesson field: waterflooding prediction and performance successful in Hogg Sand Unit, (Tech. Art.) JPT Jan., 35

ATHABASCA TAR SANDS: *See* Canada

ATKINSON, C. H. and WARD, D. C.: *Project Gasbuggy — Status Report*, (Tech. Art.) JPT Oct., 1319

AUSTIN, C. F.: *Undersea Drilling and Production Sites for Petroleum*, (Tech. Art.) JPT Oct., 1309

AUTOMATION: commingling operations: shared-time net oil measurement, (Tech. Art.) JPT Dec., 1527

AZIZ, K.: *Calculation of Bottom-Hole Pressure in Gas Wells*, (Tech. Art.) JPT July, 897

B

BACKPRESSURE CURVES: gas wells: analysis of some Gulf Coast area tests, (Tech. Art.) JPT Dec., 1541

BARIUM SULFATE: scale deposition: unique characteristics, JPT Oct., 1381

BATYCKY, J. P. and RITTER, R. A.: *Numerical Prediction of the Pipeline Flow Characteristics of Thixotropic Liquids*, SPEJ Dec., 369

BAYAZEED, A. F., et al: *The Role of Vaporization in High Percentage Oil Recovery by Pressure Maintenance*, JPT Feb., 245

BENTONITE: cements: as filler cements, (Tech. Art.) JPT Aug., 1011

BERCEGEAY, P.: *The Earning Power of Engineers*, (Tech. Art.) JPT Mar., 311

BERNARD, W. J. and CAUDLE, B. H.: *Model Studies of Pilot Waterfloods*, JPT Mar., 404

BESSE, C. P. and LEBLANC, N. F.: *An Application of Oceanographic Data in Offshore Structural Design*, SPEJ Sept., 273

BINDER, G. G., JR., and RAYMOND, L. R.: *Productivity of Wells in Vertically Fractured, Damaged Formations*, JPT Jan., 120

BITS: cutting action of a single diamond under simulated borehole conditions, JPT July, 937

diamond drill: fluid dynamics, SPEJ Dec., 347

dynamic filtration during microbit drilling, JPT Sept., 1209

indexed dull tooth penetration into dry rock under confining pressure, JPT Sept., 1225

jet: deflection tools and techniques in high-angle drilling, (Tech. Art.) JPT Apr., 469

micro type: studies of effect of fluid properties and hydraulics on drilling rate, JPT Apr., 541

rock: laboratory evaluation of penetration performance of circumferential-toothed type, JPT Jan., 113

single-blow tooth impact tests on saturated rocks under confining pressure: elevated pore pressure, SPEJ Dec., 389

BIXEL, H. C. and VAN POOLLEN, H. K.: *Pressure Drawdown and Buildup in the Presence of Radial Discontinuities*, SPEJ Sept., 301

BLAKELY, R. F. and POTTER, P. E.: *Generation of a Synthetic Vertical Profile of a Fluvial Sandstone Body*, SPEJ Sept., 243

BOATMAN, W. A., JR.: *Measuring and Using Shale Density to Aid in Drilling Wells in High-Pressure Areas*, (Tech. Art.) JPT Nov., 1423

BOONE, D. E.: *Discussion on Effect of Hardness Reducers on Failure Characteristics of Rock*, SPEJ Sept., 299

BOREHOLES: simulated conditions: cutting action of a single diamond, JPT July, 937

BOSWELL, J. L.: *Tax Consequences on Investment Yardsticks in Oil Property Evaluations*, (Tech. Art.) JPT Dec., 1547

BOTT, R. C.: *Cyclic Steam Project in a Virgin Tar Reservoir*, (Tech. Art.) JPT May, 585

BOTTOM-HOLE PRESSURE: gas wells: acoustic determination of liquid levels, (Tech. Art.) JPT May, 601

calculations for flowing and static conditions, (Tech. Art.) JPT July, 897

effect of assumptions used to calculate, JPT Apr., 547

BOTTOM-WATER DRIVE: Redwater field, Alberta, Canada: dis-

ANNUAL INDEX

References to Technical Papers and Technical Articles Published in Journal of Petroleum Technology and Technical Papers Published in Society of Petroleum Engineers Journal during 1967

A

ACCREDITATION: how it is done and what it accomplishes, (Tech. Art.) JPT Mar., 333

ACQUISITIONS: producing oil properties: tax consequences on investment yardsticks, (Tech. Art.) JPT Dec., 1547

ACTIVATION LOGGING: companion log to neutron lifetime log, (Tech. Art.) JPT Apr., 479

ADAMSON, D. K.: *Case History of a WAAIME Section*, (Tech. Art.) JPT Mar., 363

Petroleum Engineering Enrollments Continue to Climb, (Tech. Art.) JPT Jan., 62

ADDITIVES: hardness reducers: effect on failure characteristics of rock, SPEJ Sept., 295; discussion, 299

polymers: comparison of flooding with waterflooding at Huntington Beach, California, (Tech. Art.) JPT Sept., 1103

AIME: *See* American Institute of Mining, Metallurgical, and Petroleum Engineers

ALASKA: management of the naval petroleum reserves to maintain a potential, (Tech. Art.) JPT Mar., 297

ALGERIA: Hassi Er R'Mel field: gas condensate; prediction of time dependence of well deliverability, SPEJ June, 113

ALLEGHENY FIELD: *See* New York

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS: actions of the board, (Tech. Art.) JPT Apr., 512

actions of the Board of Directors, (Tech. Art.) JPT Aug., 1035

annual meeting offers strong petroleum-mining program, (Tech. Art.) JPT Jan., 66

endowments, image and manpower, (Tech. Art.) JPT Nov., 1475

petroleum recruiting: a story of diminishing reserves, (Tech. Art.) JPT June, 737

president believes minerals are the keystone to the world's economy, (Tech. Art.) JPT Sept., 1184

woman's auxiliary: case history of a new section, (Tech. Art.) JPT Mar., 363

1968 annual meeting attendance, (Tech. Art.) JPT Oct., 1369

AMMONIA: tracer: used in Deerfield, Missouri, pilot test of recovery by steam drive, JPT July, 956

AMOTT, E., et al: *Discussion on Mobility Control With Polymer Solutions*, SPEJ June, 170

ANDERSON, R. O.: *Hydrocarbons and 1980*, (Tech. Art.) JPT Oct., 1325

ANDERSON, T. O. and STAHL, E. J.: *A Study of Induced Fracturing Using an Instrumental Approach*, JPT Feb., 261; discussion, 266

ANDREWS, D. E., et al: *The Prediction of Flow Patterns, Liquid Holdup and Pressure Losses Occurring During Continuous Two-Phase Flow In Horizontal Pipelines*, JPT June, 815

ANDSAGER, R. L. and KNAPP, R. M.: *Acoustic Determination of Liquid Levels in Gas Wells*, (Tech. Art.) JPT May, 601

ANISOTROPIC RESERVOIRS: vertical fractures in matrix: performance, SPEJ June, 221

ANNIS, M. R.: *High-Temperature Flow Properties of Water-Base Drilling Fluids*, JPT Aug., 1074

ANNULUS: geometry: function in displacement mechanics in primary cementing, JPT Feb., 251

AQUIFERS: gas storage fields: calculation of leak location, (Tech. Art.) JPT May, 623

calculation of water displacement by gas in development, SPEJ June, 105

case history of development in a Silurian dolomite at Glasford, Illinois, (Tech. Art.) JPT Sept., 1119

estimating gas-water contacts using shut-in wellhead pressures, (Tech. Art.) JPT July, 877

evaluating a slightly permeable caprock of infinite thickness, JPT July, 949

ARKANSAS: Wesson field: waterflooding prediction and performance successful in Hogg Sand Unit, (Tech. Art.) JPT Jan., 35

ATHABASCA TAR SANDS: *See* Canada

ATKINSON, C. H. and WARD, D. C.: *Project Gasbuggy — Status Report*, (Tech. Art.) JPT Oct., 1319

AUSTIN, C. F.: *Undersea Drilling and Production Sites for Petroleum*, (Tech. Art.) JPT Oct., 1309

AUTOMATION: commingling operations: shared-time net oil measurement, (Tech. Art.) JPT Dec., 1527

AZIZ, K.: *Calculation of Bottom-Hole Pressure in Gas Wells*, (Tech. Art.) JPT July, 897

B

BACKPRESSURE CURVES: gas wells: analysis of some Gulf Coast area tests, (Tech. Art.) JPT Dec., 1541

BARIUM SULFATE: scale deposition: unique characteristics, JPT Oct., 1381

BATYCKY, J. P. and RITTER, R. A.: *Numerical Prediction of the Pipeline Flow Characteristics of Thixotropic Liquids*, SPEJ Dec., 369

BAYAZEED, A. F., et al: *The Role of Vaporization in High Percentage Oil Recovery by Pressure Maintenance*, JPT Feb., 245

BENTONITE: cements: as filler cements, (Tech. Art.) JPT Aug., 1011

BERCEGEAY, P.: *The Earning Power of Engineers*, (Tech. Art.) JPT Mar., 311

BERNARD, W. J. and CAUDLE, B. H.: *Model Studies of Pilot Waterfloods*, JPT Mar., 404

BESSE, C. P. and LEBLANC, N. F.: *An Application of Oceanographic Data in Offshore Structural Design*, SPEJ Sept., 273

BINDER, G. G., JR., and RAYMOND, L. R.: *Productivity of Wells in Vertically Fractured, Damaged Formations*, JPT Jan., 120

BITS: cutting action of a single diamond under simulated borehole conditions, JPT July, 937

diamond drill: fluid dynamics, SPEJ Dec., 347

dynamic filtration during microbit drilling, JPT Sept., 1209

indexed dull tooth penetration into dry rock under confining pressure, JPT Sept., 1225

jet: deflection tools and techniques in high-angle drilling, (Tech. Art.) JPT Apr., 469

micro type: studies of effect of fluid properties and hydraulics on drilling rate, JPT Apr., 541

rock: laboratory evaluation of penetration performance of circumferential-toothed type, JPT Jan., 113

single-blow tooth impact tests on saturated rocks under confining pressure: elevated pore pressure, SPEJ Dec., 389

BIXEL, H. C. and VAN POOLLEN, H. K.: *Pressure Drawdown and Buildup in the Presence of Radial Discontinuities*, SPEJ Sept., 301

BLAKELY, R. F. and POTTER, P. E.: *Generation of a Synthetic Vertical Profile of a Fluvial Sandstone Body*, SPEJ Sept., 243

BOATMAN, W. A., JR.: *Measuring and Using Shale Density to Aid in Drilling Wells in High-Pressure Areas*, (Tech. Art.) JPT Nov., 1423

BOONE, D. E.: *Discussion on Effect of Hardness Reducers on Failure Characteristics of Rock*, SPEJ Sept., 299

BOREHOLES: simulated conditions: cutting action of a single diamond, JPT July, 937

BOSWELL, J. L.: *Tax Consequences on Investment Yardsticks in Oil Property Evaluations*, (Tech. Art.) JPT Dec., 1547

BOTT, R. C.: *Cyclic Steam Project in a Virgin Tar Reservoir*, (Tech. Art.) JPT May, 585

BOTTOM-HOLE PRESSURE: gas wells: acoustic determination of liquid levels, (Tech. Art.) JPT May, 601

calculations for flowing and static conditions, (Tech. Art.) JPT July, 897

effect of assumptions used to calculate, JPT Apr., 547

BOTTOM-WATER DRIVE: Redwater field, Alberta, Canada: dis-

placement efficiency study, (Tech. Art.) JPT Apr., 449
BOUNDED RESERVOIR: radial and composite: calculation of transient oil production, SPEJ Dec., 355
BOURNE, H. A., et al: *Circumferential-Toothed Rock Bits—A Laboratory Evaluation of Penetration Performance*, JPT Jan., 113
BOYD, W. E., JR., and GRAHAM, J. R.: *An Analysis of Changing Backpressure Test Curves From Some Gulf Coast Area Gas Wells*, (Tech. Art.) JPT Dec., 1541
BOYD, W. E., JR., and MILLER, J., JR.: *Better Investment Planning of Gas-Producing Operations By Computer Simulation*, (Tech. Art.) JPT Feb., 157
BRANNON, H. R., et al: *Storm Wave Characteristics*, SPEJ Mar., 87
BRILL, J. P., et al: *An Analytical Description of Liquid Slug Flow In Small-Diameter Vertical Conduits*, JPT Mar., 419
BROOCKS, W. R., et al: *Case History of Water Pressure Maintenance Operations in the McComb Unit*, (Tech. Art.) JPT Apr., 457
BROWN, K. E., et al: *An Analytical Description of Liquid Slug Flow in Small-Diameter Vertical Conduits*, JPT Mar., 419
The Prediction of Flow Patterns, Liquid Holdup and Pressure Losses Occurring During Continuous Two-Phase Flow in Horizontal Pipelines, JPT June, 815
BRUNEAU, D. G., et al: *Applying an Information Retrieval System to Well Data*, (Tech. Art.) JPT Aug., 1005
BUCARAM, S. M.: *An Improved Paraffin Inhibitor*, (Tech. Art.) JPT Feb., 150
BUCKLEY-LEVERETT: displacement theory: application to non-communicating layered systems, JPT Nov., 1500
BUENA VISTA HILLS: *See* California
BUILDUP CURVES: *See* Pressure Buildup
BUKACEK, R. F., et al: *The Viscosity of Methane*, SPEJ Mar., 75
BUMPER SUBS: floating vessels: use when drilling, JPT Dec., 1587
BUREAU OF MINES: director believes minerals are the keystone to the world's economy, (Tech. Art.) JPT Sept., 1184
BURKE, J. A., et al: *Computer Processing of Log Data Improves Production in Chaveroo Field*, (Tech. Art.) JPT July, 889
BURNETT, P. G.: *Calculation of the Leak Location in an Aquifer Gas Storage Field*, (Tech. Art.) JPT May, 623
BURNETT, P. G., et al: *Estimating Gas-Water Contacts in Aquifer Gas Storage Fields Using Shut-In Wellhead Pressures*, (Tech. Art.) JPT July, 877
BUTTERFIELD, O. R.: *Management of the Naval Petroleum and Oil Shale Reserves: Maintaining a Potential*, (Tech. Art.) JPT Mar., 297
BUXTON, T. S. and CAMPBELL, J. M.: *Compressibility Factors for Lean Natural Gas-Carbon Dioxide Mixtures at High Pressure*, SPEJ Mar., 80

C

CALIFORNIA: Buena Vista Hills: management of the naval petroleum reserves, (Tech. Art.) JPT Mar., 297
Elk Hills: management of the naval petroleum reserves, (Tech. Art.) JPT Mar., 297
Huntington Beach field: comparison of polymer flooding and waterflooding, (Tech. Art.) JPT Sept., 1103
Inglewood field: plugging thief zones in water injection wells, (Tech. Art.) JPT Aug., 999
Los Angeles basin: effect of pressure drawdown on clean-up of clay- or silt-blocked sandstone, JPT Mar., 397
Oxnard field: cyclic steam project in virgin tar reservoir, (Tech. Art.) JPT May, 585
Wilmington field: treating and completing water injection wells, (Tech. Art.) JPT Jan., 49
CAMPBELL, J. B., et al: *Deerfield Pilot Test of Recovery by Steam Drive*, JPT July, 956
CAMPBELL, J. M.: *Petroleum Recruiting—A Story of Diminishing Reserves*, (Tech. Art.) JPT June, 737
CAMPBELL, J. M. and BUXTON, T. S.: *Compressibility Factors for Lean Natural Gas-Carbon Dioxide Mixtures at High Pressure*, SPEJ Mar., 80
CANADA: Athabasca tar sands: mining is new approach to oil production, (Tech. Art.) JPT Oct., 1337
Redwater field, Alberta: displacement efficiency study, (Tech. Art.) JPT Apr., 449
CARBON DIOXIDE: and natural gas: compressibility factors for lean mixtures at high pressure, SPEJ Mar., 80
slugs: in laboratory study of an improved water-driven LPG slug process, SPEJ Sept., 319
CARBONATES: phyical properties: correlations, SPEJ Sept., 266
CARPENTER, H. C. and LOMBARD, D. B.: *Recovering Oil by Retorting a Nuclear Chimney in Oil Shale*, (Tech. Art.) JPT June, 727
CARTER, D. V.: *Engineering Appraisals*, (Tech. Art.) JPT Feb., 193
CARTER, R. D.: *Discussion on Comparison of Alternating Direction Explicit and Implicit Procedures in Two-Dimensional Flow Calculations*, SPEJ Mar., V
CASE HISTORIES: *See* Field Case Histories
CASING: connections: new technology for improved performance, (Tech. Art.) JPT Mar., 337
failure: design criteria for completion of steam injection wells, (Tech. Art.) JPT Jan., 15; discussion, JPT June, 765
movement: factor in displacement mechanics in primary cementing, JPT Feb., 251
steam injection: use of an insulating fluid for protection, (Tech. Art.) JPT Nov., 1453
temperature: over-all heat transfer coefficients in steam and hot water injections wells, (Tech. Art.) JPT May, 607
CAUDLE, B. H. and BERNARD, W. J.: *Model Studies of Pilot Waterfloods*, JPT Mar., 404
CEMENTING: circulating temperatures: method for calculating, JPT Nov., 1507
primary: displacement mechanics, JPT Feb., 251
CEMENTS: filler: a critique, (Tech. Art.) JPT Aug., 1011
CHAVEROO FIELD: *See* New Mexico
CHEATHAM, J. B., JR.: *Strain Hardening of a Porous Limestone*, SPEJ Sept., 229
CHEMICALS: fracture-squeeze treatments: design techniques, JPT Nov., 1493
requirements and applicability determination for wettability alteration flooding, JPT June, 839
CHIERICI, G. L., et al: *Water Drive Gas Reservoirs: Uncertainty in Reserves Evaluation From Past History*, JPT Feb., 237; discussion, JPT July, 965
CIUCCI, G. M., et al: *Water Drive Gas Reservoirs: Uncertainty in Reserves Evaluation From Past History*, JPT Feb., 237; discussion, JPT July, 965
CLANTON, H. W.: *Successful Prediction and Performance in Waterflooding Wesson Hogg Sand Unit*, (Tech. Art.) JPT Jan., 35
CLAYS: drilling fluids: laboratory drilling rate and filtration studies, JPT May, 688
sandstone blocking: effect of pressure drawdown on clean-up, JPT Mar., 397
CLEGG, M. W.: *Some Approximate Solutions of Radial Flow Problems Associated With Production at Constant Well Pressure*, SPEJ Mar., 31
CLIFFSIDE FIELD: *See* Texas
CLOSMANN, P. J.: *Steam Zone Growth During Multiple-Layer Steam Injection*, SPEJ Mar., 1
CLOSMANN, P. J. and RATLIFF, N. W.: *Calculation of Transient Oil Production in a Radial Composite Reservoir*, SPEJ Dec., 355
COALS: a look ahead at synthetic hydrocarbon technology, (Tech. Art.) JPT Oct., 1329
conversion to useful hydrocarbons, (Tech. Art.) JPT Oct., 1345
COATS, K. H. and RICHARDSON, J. G.: *Calculation of Water Displacement by Gas in Development of Aquifer Storage*, SPEJ June, 105
COATS, K. H., et al: *Simulation of Three-Dimensional, Two-Phase Flow in Oil and Gas Reservoirs*, SPEJ Dec., 377
COBERLY, C. J., et al: *Ocean Floor Wellhead Arrangement for Hydraulic Oilwell Pumping*, (Tech. Art.) JPT Aug., 983
COCHRAN, N. P. and STABER, G. I.: *Progress in Producing Useful Hydrocarbons From Coal*, (Tech. Art.) JPT Oct., 1345
CODE OF ETHICS: engineering appraisals, (Tech. Art.) JPT Feb., 193
COEFFICIENTS: dispersion: for gases flowing in consolidated porous media, SPEJ Mar., 43
over-all heat transfer: steam and hot water injection wells, (Tech. Art.) JPT May, 607
COLORADO: naval oil shale reserves: management to maintain a potential, (Tech. Art.) JPT Mar., 297

COMMISSION OF ENGINEERING EDUCATION: study: should special curricula in mining, metallurgical and petroleum engineering be perpetuated? (Tech. Art.) JPT July, 909
COMPLETION: *See* Well Completion
COMPLETION PRACTICE: *See* Well Completion
COMPOSITE RESERVOIR: radial: calculation of transient oil production, SPEJ Dec., 355
COMPOSITION: critical: convergence pressure method using, SPEJ Mar., 54
filler cements: a critique, (Tech. Art.) JPT Aug., 1011
fluid: correlation with dewpoint pressure and temperature, SPEJ June, 99
unsteady-state distributions in two-phase oil reservoirs undergoing gas injection, SPEJ Mar., 61
COMPRESSIBILITY: average: effect of assumptions on bottom-hole pressure calculations in gas wells, JPT Apr., 547
factors: for lean natural gas-carbon dioxide mixtures at high pressure, SPEJ Mar., 80
COMPRESSION: axial and uniform: mode conversion technique employed in shear wave velocity studies of rock samples, SPEJ June, 136
COMPUTERS: analog: measuring dispersion coefficients for gases flowing in consolidated porous media, SPEJ Mar., 43
completion reports of directional drilling, (Tech. Art.) JPT Apr., 469
digital: bottom-hole pressure calculations in gas wells, (Tech. Art.) JPT July, 897
information retrieval system applied to well data, (Tech. Art.) JPT Aug., 1005
liquid slug flow in small-diameter vertical conduits, JPT Mar., 419
numerical solution of pressure drawdown and buildup in presence of radial discontinuities, SPEJ Sept., 301
simulation of unsteady-state distributions of fluid compositions in two-phase oil reservoirs undergoing gas injection, SPEJ Mar., 61
electronic: evaluating uncertainty in engineering calculations, JPT Dec., 1595
IBM 7044: predicting two-phase pressure drops in vertical pipe, JPT June, 829
IBM 7094: horizontal fracture treatment design study, JPT Apr., 559
integration of partial differential equations for multicomponent, two-phase transient radial flow, SPEJ June, 125
processing of log data improves production in Chaveroo field, New Mexico, (Tech. Art.) JPT July, 889
program: diagnostic analysis of dynamometer cards, JPT Jan., 97
optimization of gas storage field development, (Tech. Art.) JPT Mar., 323
shaly sands: approach to determining water saturation, JPT Oct., 1395
simulation: complex gas-producing operations offer better investment planning, (Tech. Art.) JPT Feb., 157
isothermal displacement processes with interphase mass transfer, SPEJ June, 205
pressure buildup behavior in a two-well gas-oil system, SPEJ June, 195
three-dimensional, two-phase flow in oil and gas reservoirs, SPEJ Dec., 377
statistically analyzing core data, (Tech. Art.) JPT Apr., 497
symbols: SPE subcommittee proposes new standard, (Tech. Art.) JPT May, 629
well stimulation: calculations of pressure and temperature effects on length of tubular goods, JPT Apr., 551; discussion, JPT Aug., 1085
CONDENSATES: correlation of dewpoint pressure with fluid composition and temperature, SPEJ June, 99
cycling: low-permeability, high-yield reservoir, (Tech. Art.) JPT Jan., 41; discussion, 47
fields: prediction of time dependence of well deliverability, SPEJ June, 113
multicomponent, two-phase transient radial flow: integration of partial differential equations, SPEJ June, 125
saturation: effect on mobility of low liquid-vapor ratio fluids, SPEJ Mar., 11
CONDUCTIVITY: five-spot network: effects of isolated permeability interferences, SPEJ Mar., 20
fracture: vertical: productivity of wells in damaged formations, JPT Jan., 120
CONSERVATION: helium program: storage in Cliffside field, Texas, (Tech. Art.) JPT July, 885
CONTINUING EDUCATION: professional contemporizing: a personal challenge, (Tech. Art.) JPT Sept., 1113
CONVERGENCE PRESSURE: critical composition method for calculating, SPEJ Mar., 54
COOK, A. B., et al: *The Role of Vaporization in High Percentage Oil Recovery by Pressure Maintenance*, JPT Feb., 245
CORE ANALYSIS: correlations of physical properties, SPEJ Sept., 266
errors in core oil content data measured by the retort distillation method, (Tech. Art.) JPT June, 759
statistically analyzing data, (Tech. Art.) JPT Apr., 497
CORRELATIONS: cuttings removal: factors affecting during rotary drilling, JPT June, 807
dewpoint pressure with fluid composition and temperature, SPEJ June, 99
drag reduction with modified Deborah number for dilute polymer solutions, SPEJ Sept., 325
flow patterns, liquid holdup and pressure losses occurring during continuous two-phase flow in horizontal pipelines, JPT June, 815
horizontal fractures: computer study combines treatment design aspects into digital program, JPT Apr., 559
physical properties of porous media, SPEJ Sept., 266
storm wave characteristics, SPEJ Mar., 87
turbulent pipe flow scale-up for rheologically complex fluids, SPEJ Sept., 252
vertical fracture density effect on producing capacity of a well, SPEJ June, 221
viscosity of methane up to 460F and 10,000 psia, SPEJ Mar., 75
CORROSION: control: design techniques for chemical fracture-squeeze treatments, JPT Nov., 1493
COSTS: filler cements, (Tech. Art.) JPT Aug., 1011
well data: applying an information retrieval system, (Tech. Art.) JPT Aug., 1005
COWAN, J. C. and WEINTRITT, D. J.: *Unique Characteristics of Barium Sulfate Scale Deposition*, JPT Oct., 1381
COX, J. T., et al: *Computer Processing of Log Data Improves Production In Chaveroo Field*, (Tech. Art.) JPT July, 889
CRAWFORD, H. R., et al: *A Method for Calculating Circulating Temperatures*, JPT Nov., 1507
CRAWFORD, P. B.: *Pressure Maintenance Needed Here*, (Tech. Art.) JPT Nov., 1449
CRAWFORD, P. B. and HUSKEY, W. L.: *Performance of Petroleum Reservoirs Containing Vertical Fractures in the Matrix*, SPEJ June, 221
CRAWFORD, P. B., et al: *A Method for Calculating Circulating Temperatures*, JPT Nov., 1507
CRITICAL PATH: visual path analysis, (Tech. Art.) JPT Feb., 177
CRITICAL PROPERTIES: convergence pressure calculated by critical composition method, SPEJ Mar., 54
CUNNINGHAM, R. D. and NELSON, R. G.: *A New Method for Determining a Well's In-Place Hydrocarbons From a Pressure Buildup Test*, (Tech. Art.) JPT July, 859
CURRICULA TRENDS: mining, metallurgical and petroleum engineering: should special curricula be perpetuated? (Tech. Art.) JPT July, 909
CURTIS, M. R., et al: *Computer Processing of Log Data Improves Production in Chaveroo Field*, (Tech. Art.) JPT July, 889
CUTTINGS: factors affecting removal during rotary drilling, June, 807
CYCLING: condensate reservoir: low-permeability, high-yield operation successful, (Tech. Art.) JPT Jan., 41; discussion, 47

D

DADDARIO, E. Q.: *Congressman Challenges Engineering Societies To Advise Government on Technical Matters*, (Tech. Art.) JPT May, 653
DATA: oceanographic: application in offshore structural design, SPEJ Sept., 273
well: information retrieval system applied to storage, (Tech. Art.) JPT Aug., 1005
DAUBEN, D. L. and MENZIE, D. E.: *Flow of Polymer Solutions Through Porous Media*, JPT Aug., 1065; discussion, 1072
DAVIDSON, L. B., et al: *A Mathematical Model of Reservoir Response During the Cyclic Injection of Steam*, SPEJ June, 174

DAY, J. J., et al: *Laboratory Study of Rock Softening and Means of Prevention During Steam or Hot Water Injection*, JPT May, 703

DEBORAH NUMBER: modified: correlation with drag reduction for dilute polymer solutions, SPEJ Sept., 325

DEERFIELD: *See* Missouri

DELAWARE BASIN: *See* Texas

DELAWARE-VAL VERDE BASINS: *See* Texas

DELIVERABILITY: wells: attempt to predict the time dependence in gas condensate fields, SPEJ June, 113

Gulf Coast area; analysis of changing back-pressure test curves, (Tech. Art.) JPT Dec., 1541

DEMPSEY, J. R., et al: *Practical Application of a Two-Dimensional Numerical Model for Gas Reservoir Studies*, (Tech. Art.) JPT Sept., 1127

Professional Contemporizing: A Personal Challenge, (Tech. Art.) JPT Sept., 1113

DENSITY: shale: measuring and using as aid in drilling wells in high-pressure areas, (Tech. Art.) JPT Nov., 1423

DEPOSITION: barium sulfate scale: unique characteristics, JPT Oct., 1381

DEPRIESTER, C. L., et al: *Controlled Injection of Sand Consolidation Plastic*, (Tech. Art.) JPT Apr., 487

DESIGN: completion of steam injection wells, (Tech. Art.) JPT Jan., 15; discussion, JPT June, 765

offshore structural: application of oceanographic data, SPEJ Sept, 273

techniques for chemical fracture-squeeze treatments, JPT Nov., 1493

DEVELOPMENTS: aquifer storage: calculation of water displacement by gas, SPEJ June, 105

case history of Silurian dolomite of Glasford, Illinois, (Tech. Art) JPT Sept., 1119

field: gas storage optimization, (Tech. Art.) JPT Mar., 323

fuel cells: progress in commercializing, (Tech. Art.) JPT June, 749

McComb field, Mississippi: water pressure maintenance operations; case history, (Tech. Art.) JPT Apr., 457

of engineers as managers, (Tech. Art.) JPT Jan., 11

DEW POINT: correlation of pressure with fluid composition and temperature, SPEJ June, 99

DIETRICH, W. K. and WILLHITE, G. P.: *Design Criteria for Completion of Steam Injection Wells*, (Tech Art.) JPT Jan., 15; discussion, JPT June, 765

DIRECTIONAL WELLS: deflection tools and techniques in high-angle drilling, (Tech. Art.) JPT Apr., 469

dog-leg control in drilling, JPT Jan., 107

DISCONTINUITIES: radial: effect of presence on pressure drawdown and buildup, SPEJ Sept., 301

DISCOUNTED CASH FLOW: measure of investment worth: vs percentage gain on investment method, JPT May, 679; discussion, 686

DISPERSION: coefficients for gases flowing in consolidated porous media, SPEJ Mar., 43

DISPLACEMENT EFFICIENCY: Redwater field, Alberta, Canada: field case history, (Tech. Art.) JPT Apr., 449

DISPLACEMENT MECHANISM: *See also* various types such as Gas and LPG Injection, Miscible Displacement, Thermal Recovery of Oil and Waterflooding

Buckley-Leverett: application to non-communicating layered systems, JPT Nov., 1500

isothermal: processes with interphase mass transfer, SPEJ June, 205

primary cementing, JPT Feb., 251

vaporization: role in high percentage oil recovery by pressure maintenance, JPT Feb., 245

water by gas: calculations in development of aquifer storage, SPEJ June, 105

DISSOLVED-GAS DRIVE: *See* Solution-Gas Drive

DISTILLATION: retort method: errors when measuring core oil content data, (Tech. Art.) JPT June, 759

DISTRIBUTIONS: Pearson: statistically analyzing core data, (Tech. Art.) Apr., 497

DODGE, J. S. and KRIEGER, I. M.: *The Laminar-Turbulent Transition in Suspension of Rigid Spheres*, SPEJ Sept., 259

DODSON, C. R.: *Application of the Petroleum Engineer's Report to Financing*, (Tech. Art.) JPT Feb., 187

DOERR, T. C., et al: *An Analytical Description of Liquid Slug Flow in Small-Diameter Vertical Conduits*, JPT Mar., 419

DOG-LEGS: control in directionally drilled wells, JPT Jan., 107

DOLOMITE: Silurian: case history of aquifer gas storage development of Glasford, Illinois, (Tech. Art.) Sept., 1119

DONOHUE, D. A. T.: *An Economic Appraisal of Steam Flooding in a Pennsylvania Field*, (Tech. Art.) JPT Nov., 1437

DONOHUE, D. A. T. and PRICE, H. S.: *Isothermal Displacement Processes With Interphase Mass Transfer*, SPEJ June, 205

DONOVAN, R. W.: *SPE Subcommittee Proposes New Computer Symbols Standard*, (Tech. Art.) JPT May, 629

DRAG REDUCTION: correlation with modified Deborah number for dilute polymer solutions, SPEJ Sept., 325

rheologically complex fluids: general turbulent pipe flow scale-up correlation, SPEJ Sept, 252

DRILL BIT: *See* Bits and Drilling: bits

DRILL PIPE: dynamics of string: use of bumper subs when drilling from floating vessels, JPT Dec., 1587

DRILLING: *See also* Offshore Drilling

bits: cutting action of a single diamond under simulated borehole conditions, JPT July, 937

diamond drill; fluid dynamics, SPEJ Dec., 347

single-blow tooth impact tests on saturated rocks under confining pressure; elevated pore pressure, SPEJ Dec., 389

directional: high angle; deflection tools and techniques, (Tech. Art.) JPT Apr., 469

dry rock under confining pressure: study of indexed dull bit-tooth penetration, JPT Sept., 1225

failure characteristics of rocks: effect of hardness reducers, SPEJ Sept., 295; discussion, 299

floating vessels: use of bumper subs, JPT Dec., 1587

microbit: dynamic filtration, JPT Sept., 1209

penetration performance of circumferential-toothed bits; laboratory evaluation, JPT Jan., 113

rotary: factors affecting cuttings removal, JPT June, 807

strain hardening of a porous limestone, SPEJ Sept., 229

undersea: and production sites for petroleum, (Tech. Art.) JPT Oct., 1309

wells in high-pressure areas: measuring and using shale density as aid, (Tech. Art.) JPT Nov., 1423

DRILLING FLUIDS: clay and polymer: laboratory drilling rate and filtration studies, JPT May, 688

cuttings removal: factor affecting during rotary drilling, JPT June, 807

dynamics in a diamond drill bit, SPEJ Dec., 347

emulsion: laboratory drilling rate and filtration studies, JPT July, 943

water-base: high-temperature flow properties, JPT Aug., 1074

DRILLING RATE: laboratory studies: clay and polymer drilling fluids, JPT May, 688

emulsion drilling fluids, JPT July, 943

microbit studies of effect of fluid properties and hydraulics, JPT Apr., 541

DUANE, J. W.: *Gas Storage Field Development Optimization*, (Tech. Art.) JPT Mar., 323

DYNAMOMETER: diagnostic analysis of cards, JPT Jan., 97

DYSART, G. R., et al: *Computer Calculations of Pressure and Temperature Effects on Length of Tubular Goods During Deep Well Stimulation*, JPT Apr., 551; discussion, JPT Aug., 1085

E

EAGLE CREEK FIELD: *See* Kentucky

EAKIN, J. L. and MILLER, J. S.: *Explosives Research to Improve Flow Through Low-Permeability Rock*, (Tech. Art.) JPT Nov., 1431

EARLOUGHER, R. C., JR., et al: *Pressure Buildup Behavior in a Two-Well Gas-Oil System*, SPEJ June, 195

EATON, B. A., et al: *The Prediction of Flow Patterns, Liquid Holdup and Pressure Losses Occurring During Continuous Two-Phase Flow in Horizontal Pipelines*, JPT June, 815

ECKEL, J. R.: *Microbit Studies of the Effect of Fluid Properties and Hydraulics on Drilling Rate*, JPT Apr., 541

ECONOMICS: engineering appraisals, (Tech. Art.) JPT Feb., 193

floating drilling: review of procedures after four years' experience, (Tech. Art.) JPT Feb., 167

fuel cells: progress in developing for commercial use, (Tech. Art.) JPT June, 749

gas-producing operations: better investment planning by computer simulation, (Tech. Art.) JPT Feb., 157

hydrocarbons from coal: progress in producing, (Tech. Art.) JPT Oct., 1345

oil property evaluations: tax consequences on investment yardsticks, (Tech. Art.) JPT Dec., 1547
percentage gain on investments: an investment decision yardstick, JPT May, 679; discussion, 686
steam flooding: appraisal in a Pennsylvania field, (Tech. Art.) JPT Nov., 1437
wettability alteration flooding: determination of chemical requirements and applicability, JPT June, 839
world: minerals are a keystone, (Tech. Art.) JPT Sept., 1184
ECPD: *See* Engineers' Council for Professional Development
EDUCATION: *See* Engineering Education
EFFICIENCY: displacement: Redwater field, Alberta, Canada, (Tech. Art.) JPT Apr., 449
EICKMEIER, J. R.: *Diagnostic Analysis of Dynamometer Cards*, JPT Jan., 97
EILERTS, C. K. and HAM, J. D.: *Effect of Saturation on Mobility of Low Liquid-Vapor Ratio Fluid*, SPEJ Mar., 11
EILERTS, C. K. and SUMNER, E. F.: *Integration of Partial Differential Equations for Multicomponent, Two-Phase Transient Radial Flow*, SPEJ June, 125
EJC: *See* Engineers Joint Council
ELASTICITY: rocks: simultaneous measurement with pore properties under triaxial stress conditions, SPEJ Sept., 283
ELECTRIC LOGGING: *See* Well Logging
ELK HILLS: *See* California
ELLIOTT, C. L., et al: *Estimating Gas-Water Contacts in Aquifer Gas Storage Fields Using Shut-In Wellhead Pressure*, (Tech. Art.) JPT July, 877
EMULSIONS: drilling fluids: laboratory drilling rate and filtration studies, JPT July, 943
methods for treating surface waters, (Tech. Art.) JPT Dec., 1531
ENDOWMENTS: AIME services financed by, (Tech. Art.) JPT Nov., 1475
ENERGY: equations: bottom-hole pressures in gas wells; effect of assumptions, JPT Apr., 547
fuel cells: progress in developing for commercial use, (Tech. Art.) JPT June, 745
hydrocarbons: production by 1980, (Tech. Art.) JPT Oct., 1325
synthetic; a look ahead at technology, (Tech. Art.) JPT Oct., 1329
nuclear: recovering oil by retorting a nuclear chimney in oil shale, (Tech. Art.) JPT June, 727
ENGINEERING: appraisals, (Tech. Art.) JPT Feb., 193
calculations: evaluating uncertainty, JPT Dec., 1595
manpower, (Tech. Art.) JPT Nov., 1475
societies: congressman challenges to advise government on technical matters, (Tech. Art.) JPT May, 653
ENGINEERING EDUCATION: accreditation: how it is done and what it accomplishes, (Tech. Art.) JPT Mar., 333
mining, metallurgical and petroleum engineering: should special curricula be perpetuated? (Tech. Art.) JPT July, 909
petroleum engineering: enrollments continue to climb, (Tech. Art.) JPT Jan., 62
petroleum engineers: 1966 recruiting story one of diminishing reserves, (Tech. Art.) JPT June, 737
professional contemporizing: a personal challenge, (Tech. Art.) JPT Sept., 1113
ENGINEERING MANPOWER COMMISSION: employment outlook for engineers in mining, metals and petroleum, (Tech. Art.) JPT June, 778
ENGINEERS: AIME annual meeting offers strong petroleum-mining program, (Tech. Art.) JPT Jan., 66
earning power of, (Tech. Art.) JPT Mar., 311
mining, metals and petroleum: employment outlook, (Tech. Art.) JPT June, 778
professional development into managers, (Tech. Art.) JPT Jan., 11
ENGINEERS' COUNCIL FOR PROFESSIONAL DEVELOPMENT: accreditation: how it is done and what it accomplishes, (Tech. Art.) JPT Mar., 333
ENGINEERS JOINT COUNCIL: employment outlook for engineers in mining, metals and petroleum, (Tech. Art.) JPT June, 778
ENROLLMENTS: engineering, (Tech. Art.) JPT Mar., 311
petroleum engineering: continue to climb, (Tech. Art.) JPT Jan., 62
1968 annual meeting, perspective, (Tech. Art.) JPT Oct., 1369
EQUIPMENT: *See also* names of various types
bumper subs: use when drilling from floating vessels, JPT Dec., 1587
deflection tools: high-angle drilling, (Tech. Art.) JPT Apr., 469
floating rigs: review of procedures after four years' experience, (Tech. Art.) JPT Feb., 167
hydraulic pumping: ocean floor wellhead arrangement, (Tech. Art.) JPT Aug., 983
measurements simultaneously of pore and elastic properties of rocks under triaxial stress conditions, SPEJ Sept., 283
tubular goods: connections; new technology for improved performance, (Tech. Art.) JPT Mar., 337
service conditions and performance, (Tech. Art.) JPT May, 617
wireline tool: completion technique for sand control, (Tech. Art.) JPT June, 741
EVALUATIONS: caprock: slightly permeable and of infinite thickness in aquifer gas storage, JPT July, 949
engineering appraisals, (Tech. Art.) JPT Feb., 193
filler cements: compositions, (Tech. Art.) JPT Aug., 1011
financing: application of petroleum engineer's report, (Tech. Art.) JPT Feb., 187
investment worth: percentage gain on investment method, JPT May, 679; discussion, 686
laboratory: penetration performance of circumferential-toothed rock bits, JPT Jan., 113
oil property: tax consequences on investment yardsticks, (Tech. Art.) JPT Dec., 1547
radial flow problems associated with production at constant well pressure, SPEJ Mar., 31
reserves: water drive gas reservoirs; uncertainty from past history, JPT Feb., 237; discussion, JPT July, 965
steam flooding: appraisal in a Pennsylvania field, (Tech. Art.) JPT Nov., 1437
stimulation results: Ellenburger gas wells in Delaware-Val Verde basins, (Tech. Art.) JPT Aug., 1017
uncertainity in engineering calculations, JPT Dec., 1595
EVANS, W. M., et al: *Laboratory Drilling Rate and Filtration Studies of Clay and Polymer Drilling Fluids*, JPT May, 688
Laboratory Drilling Rate and Filtration Studies of Emulsion Drilling Fluids, JPT July, 943
EVERS, J. F., et al: *Preparation and Testing of Low Permeability Porous Media To Meet Scaling Requirements for Gas Reservoir Modeling*, SPEJ June, 189
EXPLOSIVES: research to improve flow through low-permeability rock, (Tech. Art.) JPT Nov., 1431

F

FAIRHURST, C. and HAIMSON, B.: *Initiation and Extension of Hydraulic Fractures in Rocks*, SPEJ Sept., 310
FAIR-MARKET VALUE: oil and gas properties: application of the petroleum engineer's report to financing, (Tech. Art.) JPT Feb., 187
FAROUQ ALI, S. M. and SANDREA, R. J.: *The Effects of Isolated Permeability Interferences on the Sweep Efficiency and Conductivity of a Five-Spot Network*, SPEJ Mar., 20
FATT, I. and SARAF, D. N.: *Three-Phase Relative Permeability Measurement Using a Nuclear Magnetic Resonance Technique for Estimating Fluid Saturation*, SPEJ Sept., 235
FEDERAL POWER COMMISSION: gas regulation and the producing segment of the gas industry, (Tech. Art.) JPT Jan., 23
FEDERAL REGULATIONS: natural gas industry: producing segment, (Tech. Art.) JPT Jan., 23
FIELD APPLICATIONS: *See* Field Tests
FIELD CASE HISTORY: *See also* Field Tests
Huntington Beach field, California: comparison of polymer flooding and waterflooding, (Tech. Art.) JPT Sept. 1103
McComb field, Mississippi: water pressure maintenance operations, (Tech. Art.) JPT Apr., 457
Redwater field, Alberta, Canada: displacement efficiency study, (Tech. Art.) JPT Apr., 449
Spraberry Trend Area field, Texas: E. T. O'Daniel project, a successful flood, (Tech. Art.) JPT Sept, 1137
visual path analysis of small oil reservoir, (Tech. Art.) JPT Feb., 177
Wesson field, Arkansas: successful prediction and performance in waterflooding Hogg Sand Unit, (Tech Art.) JPT Jan., 35

FIELD TESTS: *See also* Evaluations
back-pressure curve analysis from some Gulf Coast area gas wells, (Tech. Art.) JPT Dec., 1541
chemical fracture-squeeze treatments: design techniques, JPT Nov., 1493
circulating temperatures: method for calculating, JPT Nov., 1507
cuttings removal: factors affecting during rotary drilling, JPT June, 807
cyclic injection of steam: mathematical model of reservoir response, SPEJ June, 174
Deerfield, Missouri: pilot tests of recovery by steam drive, JPT July, 956
evaluating a slightly permeable caprock of infinite thickness in aquifer gas storage, JPT July, 949
injection wells: steam and hot water; over-all heat transfer coefficients, (Tech. Art.) JPT May, 607
in-place hydrocarbons from pressure buildup: new method for determining, (Tech. Art.) JPT July, 859
leak location in an aquifer gas storage field, (Tech. Art.) JPT May, 623
sand consolidation: controlled injection of plastic, (Tech. Art.) JPT Apr., 487
sandstone: clay- or silt-blocked: effect of pressure drawdown on clean-up, JPT Mar., 397
steam injection: use of an insulating fluid for casing protection, (Tech. Art.) JPT Nov., 1543
unsteady-state pressure analyses in reservoir diagnosis, (Tech. Art.) JPT July, 869
wireline tool: completion technique for sand control, (Tech. Art.) JPT June, 741
FILTRATION: drilling fluids: clay and polymer; laboratory studies, JPT May, 688
dynamic: during microbit drilling, JPT Sept., 1209
laboratory studies of emulsion drilling fluids, JPT July, 943
FINANCING: *See* Economics
FISCHER, P. W., et al: *Effect of Pressure Drawdown on Clean-Up of Clay- or Silt-Blocked Sandstone*, JPT Mar., 397
FLEMING, D. K.: *Progress in Developing Commercial Fuel Cells*, (Tech. Art.) JPT June, 749
FLETCHER, P. B., et al: *Case History of Water Pressure Maintenance Operations in the McComb Unit*, (Tech. Art.) JPT Apr., 457
FLOATING VESSELS: drilling: use of bumper subs, JPT Dec., 1587
procedures: review after four years' experience, (Tech. Art.) JPT Feb., 167
FLOW PROPERTIES: high-temperature: water-base drilling fluids, JPT Aug., 1074
FLOWMETER: logging: analytical and interpretive problems, (Tech. Art.) JPT Aug., 993
FLUID FLOW: *See also* specific application, such as Gas Injection, Waterflooding, etc.
Bingham plastic slurries: in pipes and between parallel plates, SPEJ Dec., 342
dilute polymer solutions: correlation of drag reduction with modified Deborah number, SPEJ Sept., 325
dynamics in a diamond drill bit, SPEJ Nov., 347
eccentric annulus: displacement mechanics in primary cementing, JPT Feb., 251
equations of motion in porous media: propagation velocity of pressure pulses, SPEJ Dec., 333
gas: bottom-hole pressure calculations in wells, (Tech. Art.) JPT July, 897
laminar-turbulent transition in suspension of rigid spheres, SPEJ Sept., 259
liquid slug: analytical description in small-diameter vertical conduits, JPT Mar., 419
low-permeability rock: explosives research to improve, (Tech. Art.) JPT Nov., 1431
mobility control with polymer solutions, SPEJ June, 161; discussion, 170
non-Darcy: predicting the time dependence of well deliverability in gas condensate fields, SPEJ June, 113
pipe: turbulent; general scale-up correlation for rheologically complex fluids, SPEJ Sept., 252
pipelines: numerical prediction of characteristics of thixotropic liquids, SPEJ Dec., 369
polymer solutions through porous media, JPT Aug., 1065; discussion, 1072
pressure buildup behavior in a two-well gas-oil system, SPEJ June, 195
properties of water-base drilling fluids at high temperature, JPT Aug., 1074
pseudoplastic fluids: rheological properties in porous media, SPEJ June, 149; discussion, 159
radial: some approximate solutions of problems associated with production at constant well pressure, SPEJ Mar., 31
two-phase: continuous; prediction of flow patterns, liquid holdup and pressure losses occurring in horizontal pipelines, JPT June, 815
predicting pressure drops in vertical pipe, JPT June, 829
three-dimensional; simulation in oil and gas reservoirs, SPEJ Dec., 377
transient radial flow; integration of partial differential equations for multicomponent systems, SPEJ June, 125
FLUID INJECTION: *See* Gas and LPG Injection, Miscible Displacement, Thermal Recovery of Oil and Waterflooding
FLUID LOSS: microbit studies of effect on drilling rate, JPT Apr., 541
FLUID MECHANICS: convergence pressure: critical composition method for calculating, SPEJ Mar., 54
diamond drill bit, SPEJ Dec., 347
FLUID PROPERTIES: *See also* specific properties
microbit studies of effect on drilling rate, JPT Apr., 541
rheology: pseudoplastic fluids in porous media, SPEJ June, 149; discussion, 159
FLUID SATURATION: estimating from three-phase relative permeability measurement using a nuclear magnetic resonance technique, SPEJ Sept., 235
FOAMS: streaming potential and rheology, SPEJ Dec., 359
FORMATION DAMAGE: productivity of vertically fractured wells, JPT Jan., 120
steam stimulation: theoretical analysis, JPT Mar., 411
FORMATION EVALUATION: *See also* Core Analysis, Pressure Buildup, Pressure Drawdown and Well Logging
correlations of physical properties of porous media, SPEJ Sept., 266
log data: computer processing improves production in Chaveroo field, New Mexico, (Tech. Art.) JPT July, 889
neutron lifetime logging advances, (Tech. Art.) JPT Apr., 479
pressure buildup test: in-place hydrocarbons determined by new method, (Tech. Art.) JPT July, 859
production logging: analytical and interpretive problems, (Tech. Art.) JPT Aug., 993
FORMATION FRACTURES: horizontal: computer study of treatment design, JPT Apr., 559
hydraulic: initiation and extension in rocks, SPEJ Sept., 310
vertical: in matrix; performance of petroleum reservoirs, SPEJ June, 221
productivity of wells in damaged formations, JPT Jan., 120
FORMATION FRACTURING: chemical fracture-squeeze treatments: design techniques, JPT Nov., 1493
during steam and hot water injection: laboratory study of rock softening and means of prevention, JPT May, 703
induced: study using instrumental approach, JPT Feb., 261; discussion, 266
low-permeability rock: explosives research to improve flow through, (Tech. Art.) JPT Nov., 1431
FOSTER, W. R., et al: *The Equations of Motion of Fluids in Porous Media: I. Propagation Velocity of Pressure Pulses*, SPEJ Dec., 333
FRACTURED RESERVOIRS OR FRACTURING: *See* Formation Fractures and Formation Fracturing
FRACTURES: *See also* Formation Fractures
FRONING, H. R. and LEACH, R. O.: *Determination of Chemical Requirements and Applicability of Wettability Alteration Flooding*, JPT June, 839
FUELS: a look ahead at synthetic hydrocarbon technology, (Tech. Art.) JPT Oct., 1329
fuel cells: progress in developing for commercial use, (Tech. Art.) JPT June, 749
hydrocarbons: production by 1980, (Tech. Art.) JPT Oct., 1325
FUNK, J. E. and MYERS, H. M.: *Fluid Dynamics in a Diamond Drill Bit*, SPEJ Dec., 347

G

GAGNON, P. M., et al: *Applying an Information Retrieval System to Well Data*, (Tech. Art.) JPT Aug., 1005
GARNER, N. E.: *Cutting Action of a Single Diamond Under Simulated Borehole Conditions*, JPT July, 937

GAS CONDENSATE: *See* Condensate
GAS CYCLING: *See also* Cycling
oil recovery: high due to role of vaporization, JPT Feb., 245
GAS INDUSTRY: producing segment: federal gas regulation, (Tech. Art.) JPT Jan., 23
GAS INJECTION: into reservoirs of differing volatilities, (Tech. Art.) JPT Nov., 1449
isothermal processes with interphase mass transfer, SPEJ June, 205
noncommunicating layered systems: application of Buckley-Leverett displacement theory, JPT Nov., 1500
oil reservoirs: unsteady-state distributions of fluid compositions in two phases, SPEJ Mar., 61
GAS LIFT: liquid slug flow: analytical description in small-diameter vertical conduits, JPT Mar., 419
wells: predicting two-phase pressure drops in vertical pipe, JPT June, 829
GAS PRODUCTION: acoustic determination of liquid levels in wells, (Tech. Art.) JPT May, 601
computer simulation: better investment planning of operations, (Tech. Art.) JPT Feb., 157
GAS RESERVOIRS: model studies: two-dimensional numerical; practical application, (Tech. Art.) JPT Sept., 1127
modeling: preparation and testing of low permeability porous media to meet scaling requirements, SPEJ June, 189
simulation of three-dimensional, two-phase flow, SPEJ Dec., 377
water drive: reserves evaluation; uncertainty from past history, JPT Feb., 237; discussion, JPT July, 965
GAS STORAGE: aquifer: calculation of leak location, (Tech. Art.) JPT May, 623
estimating gas-water contacts in fields using shut-in wellhead pressures, (Tech. Art.) JPT July, 877
evaluating a slightly permeable caprock of infinite thickness, JPT July, 949
field development optimization, (Tech. Art.) JPT Mar., 323
helium: Cliffside field, Texas, (Tech. Art.) JPT July, 885
vaporization: role in high percentage oil recovery, JPT Feb., 245
GAS WATER CONTACT: estimating in aquifer gas storage fields using shut-in wellhead pressures, (Tech. Art.) JPT July, 877
GAS WELLS: bottom-hole pressure: calculations, (Tech. Art.) JPT July, 897
effect of assumptions used to calculate, JPT Apr., 547
Ellenburger: Delaware-Val Verde basins; study of stimulation results, (Tech. Art.) JPT Aug., 1017
Gulf Coast area: analysis of changing back pressure test curves, (Tech. Art.) JPT Dec., 1541
in-place hydrocarbons: determined from pressure buildup test, (Tech. Art.) JPT July, 859
liquid levels: acoustic determination of, (Tech. Art.) JPT May, 601
GASES: *See also* Natural Gas
convergence pressure: critical composition method for calculating, SPEJ Mar., 54
dispersion coefficients when flowing in consolidated porous media, SPEJ Mar., 43
GENERATORS: steam: Thermosludge water treating process, (Tech. Art.) JPT Dec., 1537
GILL, H. F. and LANMON, C. P.: *A Wireline Completion Technique for Sand Control*, (Tech. Art.) JPT June, 741
GLASFORD FIELD: *See* Illinois
GLASFORD STRUCTURE: *See* Illinois
GNIRK, P. F. and MUSSELMAN, J. A.: *An Experimental Study of Indexed Dull Bit-Tooth Penetration Into Dry Rock Under Confining Pressure*, JPT Sept, 1225
GOGARTY, W. B.: *Mobility Control With Polymer Solutions*, SPEJ June, 161; discussion, 170
Rheological Properties of Pseudoplastic Fluids in Porous Media, SPEJ June, 149; discussion, 159
GONDOUIN, M., et al: *An Attempt to Predict the Time Dependence of Well Deliverability in Gas Condensate Fields*, SPEJ June, 113
GONZALEZ, M. H., et al: *The Viscosity of Methane*, SPEJ Mar., 75
GOVERNMENT: engineering societies challenged by congressman to advise on technical matters, (Tech. Art.) JPT May, 653
research: progress in producing useful hydrocarbons from coal, (Tech. Art.) JPT Oct, 1345
GRAHAM, J. R. and BOYD, W. E., JR.: *An Analysis of Changing Backpressure Test Curves From Some Gulf Coast Area Gas Wells*, (Tech. Art.) JPT Dec., 1541
GRAND ISLE BLOCK 43 FIELD: *See* Louisiana
GRAPHICAL ANALYSIS: leak location in an aquifer gas storage field, (Tech. Art.) JPT May, 623
water saturation: approach to determining in shaly sands, JPT Oct., 1395
GRAY, K. E. and YANG, J. H.: *Single-Blow Bit-Tooth Impact Tests on Saturated Rocks Under Confining Pressure: II. Elevated Pore Pressure*, SPEJ Dec., 389
GRAY, K. E. and YOUNG, F. S., JR.: *Dynamic Filtration During Microbit Drilling*, JPT Sept., 1209
GREENFIELD, W. D. and LUBINSKI, A.: *Use of Bumper Subs When Drilling From Floating Vessels*, JPT Dec., 1587
GREGORY, A. R.: *Mode Conversion Technique Employed in Shear Wave Velocity Studies of Rock Samples Under Axial and Uniform Compression*, SPEJ June, 136
GUIDROZ, G. M.: *E. T. O'Daniel Project—A Successful Spraberry Flood*, (Tech. Art.) JPT Sept., 1137
GULF COAST: abandonment and salvage of deep water wells and structures; Hurricane Betsy, (Tech. Art.) JPT Mar., 287
condensate: effect of saturation on mobility of low liquid-vapor ratio fluids, SPEJ Mar. 11
gas wells: analysis of changing backpressure test curves, (Tech. Art.) JPT Dec., 1541
oceanographic data in offshore structural design, SPEJ Sept., 273
storm wave characteristics, SPEJ Mar., 87
tubular goods: high-pressure service and performance, (Tech. Art.) JPT May, 617

H

HADEN, E. L., et al: *Circumferential-Toothed Rock Bits—A Laboratory Evaluation of Penetration Performance*, JPT Jan., 113
HAIMSON, B. and FAIRHURST, C.: *Initiation and Extension of Hydraulic Fractures in Rocks*, SPEJ Sept., 310
HAM, J. D. and EILERTS, C. K.: *Effect of Saturation on Mobility of Low Liquid-Vapor Ratio Fluids*, SPEJ Mar., 11
HANKS, R. W. and PRATT, D. R.: *On the Flow of Bingham Plastic Slurries in Pipes and Between Parallel Plates*, SPEJ Dec., 342
HARDNESS: reducers: effect on failure characteristics of rock, SPEJ Sept., 295; discussion, 299
HARRISON, N. W.: *A Study of Stimulation Results of Ellenburger Gas Wells in the Delaware-Val Verde Basin*, (Tech. Art.) JPT Aug., 1017
HASSI ER R'MEL FIELD: *See* Algeria
HEADLEE DEVONIAN FIELD: *See* Texas
HEAT: conduction: theoretical analysis of steam stimulation, JPT Mar., 411
HEAT CONDUCTION: *See* Heat: conduction
HEAT TRANSFER: over-all coefficients in steam and hot water injection wells, (Tech. Art.) JPT May, 607
HELIUM: storage in Cliffside field, Texas, (Tech. Art.) JPT July, 885
HENDERSON, J. H., et al: *Practical Application of a Two-Dimensional Numerical Model for Gas Reservoir Studies*, (Tech. Art.) JPT Sept., 1127
HIBBARD, W. R., JR.: *A Look Ahead at Synthetic Hydrocarbon Technology*, (Tech. Art.) JPT Oct., 1329
Minerals—Keystone to the World's Economy, (Tech. Art.) JPT Sept., 1184
HIGH PRESSURE: areas: measuring and using shale density to aid in drilling wells, (Tech. Art.) JPT Nov., 1423
mixtures of lean natural gas-carbon dioxide: compressibility factors for, SPEJ Mar., 80
HILLHOUSE, J. D. and USTICK, R. E.: *Comparison of Polymer Flooding and Waterflooding at Huntington Beach, California*, (Tech. Art.) JPT Sept., 1103
HISTORY: federal gas regulation: producing segment of the gas industry, (Tech. Art.) JPT Jan., 23
water drive gas reservoirs: reserves evaluation uncertain, JPT Feb., 237; discussion, JPT July, 965
HOFFMANN, F. and TRUDGEN, P.: *Statistically Analyzing Core Data*, (Tech. Art.) JPT Apr., 497
HOPKIN, E. A.: *Factors Affecting Cuttings Removal During Rotary Drilling*, JPT June, 807
HOPKINSON, E. C., et al: *Advances in Neutron Lifetime Logging*, (Tech. Art.) JPT Apr., 479
HUITT, J. L., et al: *A Computer Study of Horizontal Fracture Treatment Design*, JPT Apr., 559

Laboratory Study of Rock Softening and Means of Prevention During Steam or Hot Water Injection, JPT May, 703
HULL, R. J.: *The Thermosludge Water Treating and Steam Generation Process*, (Tech. Art.) JPT Dec., 1537
HULSEY, B. W., et al: *General Turbulent Pipe Flow Scale-Up Correlation for Rheologically Complex Fuids*, SPEJ Sept., 252
HUNTINGTON BEACH FIELD: *See* California
HURST, W.: *Discussion on Water Drive Gas Reservoirs: Uncertainty in Reserves Evaluation From Past History*, JPT July, 965
HUSKEY, W. L. and CRAWFORD, P. B.: *Performance of Petroleum Reservoirs Containing Vertical Fractures in the Matrix*, SPEJ June, 221
HUSSON, J., et al: *An Attempt to Predict the Time Dependence of Well Deliverability in Gas Condensate Fields*, SPEJ June, 113
HYDRAULIC SYSTEMS: oilwell pumping: ocean floor wellhead arrangement, (Tech. Art.) JPT Aug., 983
HYDROCARBONS: from coal: progress in producing, (Tech. Art.) JPT Oct., 1345
production by 1980, (Tech. Art.) JPT Oct., 1325
synthetic: a look ahead at technology, (Tech. Art.) JPT Oct., 1329

I

IFFLY, R., et al: *An Attempt to Predict the Time Dependence of Well Deliverability in Gas Condensate Fields*, SPEJ June, 113
ILLINOIS: Glasford field: gas-water contacts estimated in aquifer gas storage fields using shut-in wellhead pressures, (Tech. Art.) JPT July, 877
Glasford structure: case history of aquifer gas storage development in a Silurian dolomite, (Tech. Art.) JPT Sept., 1119
Leaf River field: evaluating a slightly permeable caprock of infinite thickness in aquifer gas storage, JPT July, 949
IMPORTS: hydrocarbons by 1980, (Tech. Art.) JPT Oct., 1325
IN SITU COMBUSTION: *See* Thermal Recovery of Oil
INFORMATION RETRIEVAL: storage system applied to well data, (Tech. Art.) JPT Aug., 1005
INGLEWOOD FIELD: *See* California
INHIBITOR: paraffin: laboratory study improves, (Tech. Art.) JPT Feb., 150
INJECTION: *See also* Gas and LPG Injection, Miscible Displacement, Thermal Recovery of Oil and Waterflooding
sand consolidation plastic: control of, (Tech. Art.) JPT Apr., 487
steam: mathematical model of reservoir response during cycling, SPEJ June, 174
steam zone growth in multiple-layer system, SPEJ Mar., 1
water: hot; laboratory study of rock softening and means of prevention, JPT May, 703
McComb field, Mississippi; case history of pressure maintenance operations, (Tech. Art.) JPT Apr., 457
INJECTION WELLS: steam: and hot water; over-all heat transfer coefficients, (Tech. Art.) JPT May, 607
cyclic project in virgin tar reservoir, (Tech. Art.) JPT May, 585
design criteria for completion, (Tech. Art.) JPT Jan., 15; discussion, JPT June, 765
water: plugging thief zones, (Tech. Art.) JPT Aug., 999
treating and completing in Wilmington field, California, (Tech. Art.) JPT Jan., 49
INTERFERENCE: isolated permeability: effects on sweep efficiency and conductivity of five-spot network, SPEJ Mar., 20
INTERPRETATION: log an approach to determining water saturation in shaly sands, JPT Oct., 1395
problems of production logging, (Tech. Art.) JPT Aug., 993
INVESTMENTS: engineering appraisal format, (Tech. Art.) JPT Feb., 193
percentage gain on: an investment decision yardstick, JPT May, 679; discussion, 686
planning of gas-producing operations better by computer simulation, (Tech. Art.) JPT Feb., 157
yardsticks: tax consequences in oil property evaluations, (Tech. Art.) JPT Dec., 1547

J

JEFFUS, D. M. and STONER, O. E.: *Abandonment and Salvage of Deep Water Wells and Structures*, (Tech. Art.) JPT Mar., 287
JOHNSON, F. S., et al: *The Role of Vaporization in High Percentage Oil Recovery by Pressure Maintenance*, JPT Feb., 245
JOINTS: cross and T: stresses at intersection of tubes, JPT May, 695
JONES, L. D.: *Analytical and Interpretive Problems of Production Logging*, (Tech. Art.) JPT Aug., 993

K

KAITZ, M.: *Percentage Gain on Investment — An Investment Decision Yardstick*, JPT May, 679; discussion, 686
KATTAWAR, G. W., et al: *Storm Wave Characteristics*, SPEJ Mar., 87
KATZ, D. L. and LEGATSKI, M. W.: *Dispersion Coefficients for Gases Flowing in Consolidated Porous Media*, SPEJ Mar., 43
KEHLE, R. O. and WEAVER, R. H.: *Discussion on A Study of Induced Fracturing Using an Instrumental Approach*, JPT Feb., 266
KENNEDY, H. T. and NEMETH, L. K.: *A Correlation of Dewpoint Pressure With Fluid Composition and Temperature*, SPEJ June, 99
KENTUCKY: Eagle Creek field: gas-water contacts estimated in aquifer gas storage fields using shut-in wellhead pressures, (Tech. Art.) JPT July, 877
KIRKPATRICK, C. V.: *Accreditation: How It Is Done and What It Accomplishes*, (Tech. Art.) JPT Mar., 333
KNAPP, R. M. and ANDSAGER, R. L.: *Acoustic Determination of Liquid Levels in Gas Wells*, (Tech. Art.) JPT May, 601
KNIGHT, R. K., et al: *Discussion on Mobility Control With Polymer Solutions*, SPEJ June, 170
KNOWLES, C. R., et al: *The Prediction of Flow Patterns, Liquid Holdup and Pressure Losses Occurring During Continuous Two-Phase Flow in Horizontal Pipelines*, JPT June, 815
KNOX, J. A., et al: *Design Techniques for Chemical Fracture-Squeeze Treatments*, JPT Nov., 1493
KRIEGER, I. M. and DODGE, J. S.: *The Laminar-Turbulent Transition in Suspension of Rigid Spheres*, SPEJ Sept., 259
KRUEGER, R. F., et al: *Effect of Pressure Drawdown on Clean-Up of Clay- or Silt-Blocked Sandstone*, JPT Mar., 397

L

LABORATORY STUDIES: barium sulfate scale deposition: unique characteristics, JPT Oct., 1381
bits: cutting action of a single diamond under simulated borehole conditions, JPT July, 937
single-blow tooth impact tests on saturated rocks under confining pressure; elevated pore pressure, SPEJ Dec., 389
condensate saturation: effect on mobility of low liquid-vapor ratio fluids, SPEJ Mar., 11
dilute polymer solutions: correlation of drag reduction with modified Deborah number, SPEJ Sept., 325
dispersion coefficients for gases flowing in consolidated porous media, SPEJ Mar., 43
displacement efficiency: Redwater field, Alberta, Canada, (Tech. Art.) JPT Apr., 449
displacement mechanics in primary cementing, JPT Feb., 251
drilling fluids: factors affecting cuttings removal, JPT June, 807
water-base; high-temperature flow properties, JPT Aug., 1074
drilling rate: and filtration of clay and polymer drilling fluids, JPT May, 688
and filtration of emulsion drilling fluids, JPT July, 943
effect of fluid properties and hydraulics; microbit studies, JPT Apr., 541
dynamic filtration during microbit drilling, JPT Sept., 1209
errors in core oil content data measured by the retort distillation method, (Tech. Art.) JPT June, 759
five-spot network: effects of isolated permeability interferences on sweep efficiency and conductivity, SPEJ Mar., 20
flow of polymer solutions through porous media, JPT Aug., 1065; discussion, 1072
foam: streaming potential and rheology, SPEJ Dec., 359

gas condensate fields: prediction of time dependence of well deliverability, SPEJ June, 113
gas reservoir: modeling; preparation and testing of low permeability porous media to meet scaling requirements, SPEJ June, 189
practical application of a two-dimensional numerical model, (Tech. Art.) JPT Sept., 1127
improved water-driven LPG slug process, SPEJ Sept., 319
indexed dull bit-tooth penetration into dry rock under confining pressure, JPT Sept., 1225
mobility control with polymer solutions, SPEJ June, 161
natural gas-carbon dioxide: compressibility factors for lean mixtures at high pressure, SPEJ Mar., 80
paraffin deposition: inhibitor improved, (Tech. Art.) JPT Feb., 150
penetration performance of circumferential-toothed rock bits, JPT Jan., 113
physical properties of porous media: correlations, SPEJ Sept., 266
polymer spheres: laminar-turbulent transition in suspension, SPEJ Sept., 259
pseudoplastic fluids: rheological properties in porous media, SPEJ June, 149; discussion, 159
relative permeability: three-phase; measurement using a nuclear magnetic resonance technique, SPEJ Sept., 235
rheologically complex fluids: general turbulent pipe flow scale-up correlation, SPEJ Sept., 252
rocks: failure characteristics; effect of hardness reducers, SPEJ Sept., 295; discussion, 299
simultaneous measurement of pore and elastic properties under triaxial stress conditions, SPEJ Sept., 283
softening; means of prevention during steam or hot water injection, JPT May, 703
strain hardening of a porous limestone, SPEJ Sept., 229
sandstone: clay- or silt-blocked: effect of pressure drawdown on clean-up, JPT Mar., 397
shear wave velocity: mode conversion technique employed in studies of rock samples under axial and uniform compression, SPEJ June, 136
steam injection: use of an insulating fluid for casing protection, (Tech. Art.) JPT Nov., 1453
tubes: stresses at intersection; cross- and T-joints, JPT May, 695
vaporization: role in high percentage oil recovery by pressure maintenance, JPT Feb., 245
vertical fractures: in matrix; performance of petroleum reservoirs, SPEJ June, 221
viscosity of methane, SPEJ Mar., 75
waterflooding: five-spot pilot; model studies, JPT Mar., 404
wettability alteration flooding: determination of chemical requirements and applicability, JPT June, 839
LACT: commingling operation: shared-time net oil measurement, (Tech. Art.) JPT Dec., 1527
LANMON, C. P. and GILL, H. F.: *A Wireline Completion Technique for Sand Control*, (Tech. Art.) JPT June, 741
LAPLACE EQUATION: radial flow problems: some approximate solutions associated with production at constant well pressure, SPEJ Mar., 31
LARSEN, A. L.: *Methods for Treating Surface and Subsurface Waters*, (Tech. Art.) JPT Dec., 1531
LASATER, R. M., et al: *Design Techniques for Chemical Fracture-Squeeze Treatments*, JPT Nov., 1493
LAWHON, C. P., et al: *Laboratory Drilling Rate and Filtration Studies of Clay and Polymer Drilling Fluids*, JPT May, 688
Laboratory Drilling Rate and Filtration Studies of Emulsion Drilling Fluids, JPT July, 943
LEACH, R. O. and FRONING, H R.: *Determination of Chemical Requirements and Applicability of Wettability Alteration Flooding*, JPT June, 839
LEAF RIVER FIELD: *See* Illinois
LEAKS: location in aquifer gas storage field; calculation of, (Tech. Art.) JPT May, 623
LEBLANC, N. F. and BESSE, C. P.: *An Application of Oceanographic Data in Offshore Structural Design*, SPEJ Sept., 273
LEE, A. L., et al: *The Viscosity of Methane*, SPEJ Mar., 75
LEGATSKI, M. W. and KATZ, D. L.: *Dispersion Coefficients for Gases Flowing in Consolidated Porous Media*, SPEJ Mar., 43
LEUTWYLER, K.: *Discussion on Computer Calculations of Pressure and Temperature Effects on Length of Tubular Goods During Deep Well Stimulation*, JPT Aug., 1085
Discussion on Design Criteria for Completion of Steam Injection Wells, (Tech. Art.) JPT June, 765
LIMESTONES: cutting action of a single diamond under simulated borehole conditions, JPT July, 937
laboratory drilling rate and filtration studies of emulsion drilling fluids, JPT July, 943
porous: strain hardening, SPEJ Sept., 229
LIQUID LEVEL: gas wells: acoustic determination of, (Tech. Art.) JPT May, 601
LIQUIDS: holdup: horizontal pipelines; prediction when occurring during continuous two-phase flow, JPT June, 815
slug flow: analytical description in small-diameter vertical conduits, JPT Mar., 419
thixotropic: numerical prediction of pipeline flow characteristics, SPEJ Dec., 369
LITHOLOGY: fluvial sandstone body: generation of a synthetic vertical profile, SPEJ Sept., 243
LOG INTERPRETATION: *See* Interpretation
LOGGING: *See* Well Logging
LOMBARD, D. B. and CARPENTER, H. C.: *Recovering Oil by Retorting a Nuclear Chimney in Oil Shale*, (Tech. Art.) JPT June, 727
LORD, D. L., et al: *General Turbulent Pipe Flow Scale-Up Correlation for Rheologically Complex Fiuds*, SPEJ Sept., 252
LOUISIANA: Grand Isle Block 43 field: dog-leg control in directionally drilled wells, JPT Jan., 107
offshore: controlled injection of sand consolidation plastic, (Tech. Art.) JPT Apr., 487
floating drilling; review of procedures after four years' experience, (Tech. Art.) JPT Feb., 167
Sunshine field: performance predictions of the Marg Tex oil reservoir using unsteady-state calculations, (Tech. Art.) JPT May, 595
Tigre Lagoon field: prediction of flow patterns, liquid holdup and pressure losses occurring during continuous two-phase flow in horizontal pipelines, JPT June, 815
West Delta Block 117: abandonment and salvage of deep water wells and structures, (Tech. Art.) JPT Mar., 287
LOWE, D. K., et al: *A Computer Study of Horizontal Fracture Treatment Design*, JPT Apr., 559
LOWE, R. M.: *Performance Predictions of the Marg Tex Oil Reservoir Using Unsteady-State Calculations*, (Tech. Art.) JPT May, 595
LPG INJECTION: water-driven process: laboratory study of improved type, SPEJ Sept., 319
LUBINSKI, A. and GREENFIELD, W. D.: *Use of Bumper Subs When Drilling From Floating Vessels*, JPT Dec., 1587

M

MANAGEMENT: naval petroleum and oil shale reserves: maintaining a potential, (Tech. Art.) JPT Mar., 297
planning by visual path analysis, (Tech. Art.) JPT Feb., 177
so you want to be a manager? (Tech. Art.) JPT Jan., 11
MANRY, C. W., et al: *Displacement Mechanics in Primary Cementing*, JPT Feb., 251
MANTOOTH, M. A., et al: *Controlled Injection of Sand Consolidation Plastics*, (Tech. Art.) JPT Apr., 487
MARKOV PROCESSES: transition procedure: used in generation of a synthetic vertical profile of a fluvial sandstone body, SPEJ Sept., 243
MARSDEN, S. S. and RAZA, S. H.: *The Streaming Potential and the Rheology of Foam*, SPEJ Dec., 359
MARTIN J. C., et al: *A Theoretical Analysis of Steam Stimulation*, JPT Mar., 411
MARTIN, W. L., et al: *Use of an Insulating Fluid for Casing Protection During Steam Injection*, (Tech. Art.) JPT Nov., 1453
MASS TRANSFER: interphase: isothermal displacement processes with, SPEJ June, 205
MATHEMATICAL MODELING: *See* Models: mathematical
MATSON, B. G., et al: *Computer Calculations of Pressure and Temperature Effects on Length of Tubular Goods During Deep Well Stimulation*, JPT Apr., 551; discussion, JPT Aug., 1085
MCCOMB FIELD: *See* Mississippi
MCDUFFIE, J. C., JR.: *Shared-Time Net Oil Measurement for Commingling Operations*, (Tech. Art.) JPT Dec., 1527
MCFARLANE, R. C., et al: *Evaluating Uncertainty in Engineering Calculations*, JPT Dec., 1595

Unsteady-State Distributions of Fluid Compositions in Two-Phase Oil Reservoirs Undergoing Gas Injection, SPEJ Mar., 61
McGLOTHLIN, B. B., et al: *A Computer Study of Horizontal Fracture Treatment Design*, JPT Apr., 559
Laboratory Studies of Rock Softening and Means of Prevention During Steam or Hot Water Injection, JPT May, 703
McLEAN, R. H., et al: *Displacement Mechanics in Primary Cementing*, JPT Feb., 251
McMILLEN, J. M., et al: *The Equations of Motion of Fluids in Porous Media: I. Propagation Velocity of Pressure Pulses*, SPEJ Dec., 333
MEASUREMENT: oil, net: shared-time for commingling operations, (Tech. Art.) JPT Dec., 1527
shale density: aid in drilling wells in high-pressure areas, (Tech. Art.) JPT Nov., 1423
simultaneous: pore and elastic properties of rocks under triaxial stress conditions, SPEJ Sept., 283
three-phase relative permeability: using a nuclear magnetic resonance technique for estimating fluid saturation, SPEJ Sept., 235
MELTON, L. L., et al: *General Turbulent Pipe Flow Scale-Up Correlation for Rheologically Complex Fluids*, SPEJ Sept., 252
MENZIE, D. E. and DAUBEN, D. L.: *Flow of Polymer Solutions Through Porous Media*, JPT Aug., 1065; discussion, 1072
METHANE: viscosity: from 100 to 460F and 200 to 10,000 psia, SPEJ Mar., 75
MILLER, F. G., et al: *A Mathematical Model of Reservoir Response During the Cyclic Injection of Steam*, SPEJ June, 174
Pressure Buildup Behavior in a Two-Well Gas-Oil System, SPEJ June, 195
Unsteady-State Distributions of Fluid Compositions in Two-Phase Oil Reservoirs Undergoing Gas Injection, SPEJ Mar., 61
MILLER, J., JR., and BOYD, W. E., JR.: *Better Investment Planning of Gas-Producing Operations by Computer Simulation*, (Tech. Art.) JPT Feb., 157
MILLER, J. S. and EAKIN, J. L.: *Explosives Research to Improve Flow Through Low-Permeability Rock*, (Tech. Art.) JPT Nov., 1431
MILLER, R. N. and O'DELL, H. G.: *Successfully Cycling a Low-Permeability, High-Yield Gas Condensate Reservoir*, (Tech. Art.) JPT Jan., 41; discussion, 47
MINERALS: barium sulfate: unique characteristics of scale deposition, JPT Oct., 1381
keystone to the world's economy, (Tech. Art.) JPT Sept., 1184
science and technology: NAS-NRC concerned over slow advances, (Tech. Art.) JPT Feb., 215
MINING: AIME annual meeting offers strong petroleum-mining program, (Tech. Art.) JPT Jan., 66
Athabasca tar sands, Canada: new approach to oil production, (Tech. Art.) JPT Oct., 1337
curricula: should special industry requirements be perpetuated in educational institutions? (Tech. Art.) JPT July, 909
MINTON, R. C.: *Review of Procedures After Four Years Experience in Floating Drilling*, (Tech. Art.) JPT Feb., 167
MISCIBLE DISPLACEMENT: water-driven LPG slug process: laboratory study of an improved type, SPEJ Sept., 319
MISSISSIPPI: McComb field: water pressure maintenance operations; field case history, (Tech. Art.) JPT Apr., 457
MISSOURI: Deerfield: pilot test of recovery by steam drive, JPT July, 956
MIXTURES: lean: natural gas-carbon dioxide; compressibility factors at high pressure, SPEJ Mar., 80
MOBILITY: control with polymer solutions, SPEJ June, 161; discussion, 170
low liquid-vapor ratio fluids: effect of saturation on, SPEJ Mar., 11
MOBILITY RATIO: control with polymers: comparison of polymer flooding and waterflooding at Huntington Beach, California, (Tech. Art.) JPT Sept., 1103
waterflooding: model studies of five-spot pilot, JPT Mar., 404
MODELS: analytical: displacement mechanics in primary cementing, JPT Feb., 251
Bingham plastic: flow of slurries in pipes and between parallel plates, SPEJ Dec., 342
conceptual: liquid slug flow; analytical description in small-diameter vertical conduits, JPT Mar., 419
dispersion: coefficients for gases flowing in consolidated porous media, SPEJ Mar., 43
gas reservoir: preparation and testing of low-permeability porous media to meet scaling requirements, SPEJ June, 189
Hele Shaw: effects of isolated permeability interferences on sweep efficiency and conductivity of five-spot network, SPEJ Mar., 20
idealized: theoretical analysis of steam stimulation, JPT Mar., 411
layered: application of Buckley-Leverett displacement theory to noncommunicating systems, JPT Nov., 1500
mathematical: gas injection into two-phase oil reservoirs; unsteady-state distributions of fluid compositions, SPEJ Mar., 61
isothermal displacement processes with interphase mass transfer, SPEJ June, 205
Markov processes; generation of a synthetic vertical profile of a fluvial sandstone body, SPEJ Sept., 243
percentage gain on investment, JPT May, 679; discussion, 686
productivity of wells in vertically fractured, damaged formations, JPT Jan., 120
reservoir response during the cyclic injection of steam, SPEJ June, 174
turbulent pipe flow scale-up correlation for rheologically complex fluids, SPEJ Sept., 252
two-dimensional; practical application for gas reservoir studies, (Tech. Art.) JPT Sept., 1127
potentiometric, lucite and electrical resistivity types: performance study of petroleum reservoirs containing vertical fractures in the matrix, SPEJ June, 221
scaled: pilot waterflood studies, JPT Mar., 404
MORSE, J. V. and OTT, F. III: *Field Application of Unsteady-State Pressure Analyses in Reservoir Diagnosis*, (Tech. Art.) JPT July, 869
MUELLER, T. D., et al: *A Mathematical Model of Reservoir Response During the Cyclic Injection of Steam*, SPEJ June, 174
Evaluating Uncertainty in Engineering Calculations, JPT Dec., 1595
Pressure Buildup Behavior in a Two-Well Gas-Oil System, SPEJ June, 195
Unsteady-State Distributions of Fluid Compisitions in Two-Phase Oil Reservoirs Undergoing Gas Injection, SPEJ Mar., 61
MULTIPLE ZONES: steam injection: steam zone growth, SPEJ Mar., 1
MURPHY, W. C. and SMITH, D. K.: *A Critique of Filler Cements*, (Tech. Art.) JPT Aug., 1011
MUSSELMAN, J. A. and GNIRK, P. F.: *An Experimental Study of Indexed Dull Bit-Tooth Penetration Into Dry Rock Under Confining Pressure*, JPT Sept., 1225
MYERS, H. M. and FUNK, J. E.: *Fluid Dynamics in a Diamond Drill Bit*, SPEJ Dec., 347

N

NATIONAL ACADEMY OF SCIENCE: mineral science and technology: concern over slow advances, (Tech. Art.) JPT Feb., 215
NATIONAL AFFAIRS COMMITTEE: AIME: advises government on mineral engineering matters, (Tech. Art.) JPT May, 653
NATIONAL RESEARCH COUNCIL: mineral science and technology: concern over slow advances, (Tech. Art.) JPT Feb., 215
NATURAL GAS: *See also* Gas
and carbon dioxide: compressibility factors for lean mixtures at high pressure, SPEJ Mar., 80
aquifer storage field: calculation of leak location, (Tech. Art.) JPT May, 623
case history of development in a Silurian dolomite at Glasford, Illinois, (Tech. Art.) JPT Sept., 1119
development; calculation of water displacement by gas, SPEJ June, 105
estimating gas-water contacts using shut-in wellhead pressures, (Tech. Art.) JPT July, 877
Delaware-Val Verde basins: study of stimulation results of Ellenburger gas wells, (Tech. Art.) JPT Aug., 1017
federal regulation and producing segment of gas industry, (Tech. Art.) JPT Jan., 23
gas storage field development optimization, (Tech. Art.) JPT Mar., 323
liquid level in wells: acoustic determination of, (Tech. Art.) JPT May, 601
producing operations: better investment planning by com-

producing operations: better investment planning by computer simulation, (Tech. Art.) JPT Feb., 157
NAVAL PETROLEUM RESERVES: management to maintain a potential, (Tech. Art.) JPT Mar., 297
NELSON, A. D., et al: *Practical Application of a Two-Dimensional Numerical Model for Gas Reservoir Studies,* (Tech. Art.) JPT Sept., 1127
NELSON, C. C., et al: *Ocean Floor Wellhead Arrangement for Hydraulic Oilwell Pumping,* (Tech. Art.) JPT Aug., 983
NELSON, R. G. and CUNNINGHAM, R. D.: *A New Method for Determining a Well's In-Place Hydrocarbons From a Pressure Buildup Test,* (Tech. Art.) JPT July, 859
NEMETH, L. K. and KENNEDY, H. T.: *A Correlation of Dewpoint Pressure With Fluid Composition and Temperature,* SPEJ June, 99
NEUMAN, S. P. and WITHERSPOON, P. A.: *Evaluating a Slightly Permeable Caprock in Aquifer Gas Storage: I. Caprock of Infinite Thickness,* JPT July, 949
NEUTRON LIFETIME LOGGING: advances in, (Tech. Art.) JPT Apr., 479
NEW MEXICO: Chaveroo field: computer processing of log data improves production, (Tech. Art.) JPT July, 889
Pictured Cliffs gas reservoir: Project Gasbuggy; status report, (Tech. Art.) JPT Oct., 1319
NEW YORK: Allegheny field: induced fracturing study using instrumental approach, JPT Feb., 261; discussion, 266
NEWTONIAN FLUIDS: equations of motion in porous media: propagation velocity of pressure pulses, SPEJ Dec., 333
NIELSEN, R. L., et al: *Simulation of Three-Dimensional, Two-Phase Flow in Oil and Gas Reservoirs,* SPEJ Dec., 377
NITROGEN: role on depletion performance of volatile reservoir fluids, (Tech. Art.) JPT Nov., 1449
NON-NEWTONIAN SYSTEMS: Bingham plastic slurries: flow in pipes and between parallel plates, SPEJ Dec., 342
pseudoplastic fluids: rheological properties in porous media, SPEJ June, 149; discussion, 159
rheologically complex fluids: general turbulent pipe flow scale-up correlation, SPEJ Sept., 252
NUCLEAR ENERGY: Project Gasbuggy: status report, (Tech. Art.) JPT Oct., 1319
NUCLEAR EXPLOSIONS: oil shale: recovering oil by retorting a nuclear chimney, (Tech. Art.) JPT June, 727
Project Gasbuggy: status report, (Tech. Art.) JPT Oct., 1319
NUCLEAR LOGGING: neutron lifetime log: advances in, (Tech. Art.) JPT Apr., 479
NUCLEAR MAGNETIC RESONANCE: fluid saturation estimation: three-phase relative permeability measurement, SPEJ Sept., 235
NUMERICAL SOLUTIONS: bottom-hole pressures: gas wells; flowing and static conditions, (Tech. Art.) JPT July, 897
effect of assumptions used to calculate for gas wells, JPT Apr., 547
caprock permeability: infinite thickness; evaluating in aquifer gas storage, JPT July, 949
chemical fracture-squeeze treatments: design techniques, JPT Nov., 1493
condensates: multicomponent, two-phase transient radial flow; integration of partial differential equations, SPEJ June, 125
cyclic injection of steam: mathematical model of reservoir response, SPEJ June, 174
equations of motion of fluids in porous media: propagation velocity of pressure pulses, SPEJ Dec., 333
flow in pipes and between parallel plates: Bingham plastic slurries, SPEJ Dec., 342
fluid dynamics in a diamond drill bit, SPEJ Dec., 347
gas condensate fields: prediction of time dependence of well deliverability, SPEJ June, 113
horizontal pipelines: prediction of flow patterns, liquid holdup and pressure losses occurring during continuous two-phase flow, JPT June, 815
initiation and extension of hydraulic fractures in rocks, SPEJ Sept., 310
in-place hydrocarbons: determined from pressure buildup test, (Tech. Art.) JPT July, 859
isothermal displacement processes with interphase mass transfer, SPEJ June, 205
pipeline flow characteristics of thixotropic liquids, SPEJ Dec., 369
pressure buildup behavior in a two-well gas-oil system, SPEJ June, 195
pressure drawdown and buildup in presence of radial discontinuities, SPEJ Sept., 301
pressure drops: two-phase; predicting in vertical pipe, JPT June, 829
radial flow problems associated with production at constant well pressure, SPEJ Mar., 31
simulation of three-dimensional, two-phase flow in oil and gas reservoirs, SPEJ Dec., 377
specific surface: simplified method for determining, JPT Aug., 1081
steam stimulation: theoretical analysis, JPT Mar., 411
steam zone growth during multiple-layer steam injection, SPEJ Mar., 1
storm wave profiles in Gulf of Mexico, SPEJ Mar., 87
streaming potential and rheology of foam, SPEJ Dec., 359
transient oil production in a radial composite reservoir, SPEJ Dec., 355
tubular goods length: computer calculations of pressure and temperature effects during deep well stimulation, JPT Apr., 551; discussion, JPT Aug., 1085
two-dimensional model: practical application for gas reservoir studies, (Tech. Art.) JPT Sept., 1127
water displacement by gas in devlopment of aquifer storage, SPEJ June, 105

O

OBORN, R. W. and RYAN, R.: *Case History of Aquifer Gas Storage Development in a Silurian Dolomite at Glasford, Illinois,* (Tech. Art.) JPT Sept., 1119
OCEANOGRAPHY: data: application in offshore structural design, SPEJ Sept., 273
ODEH, A. S., et al: *The Equations of Motion of Fluids in Porous Media: I. Propagation Velocity of Pressure Pulses,* SPEJ Dec., 333
O'DELL, H. G. and MILLER, R. N.: *Successfully Cycling a Low-Permeability, High-Yield Gas Condensate Reservoir,* (Tech. Art.) JPT Jan., 41; discussion, 47
OEFELEIN, F. H. and ROBERTSON, J. O., JR.: *Plugging Thief Zones in Water Injection Wells,* (Tech. Art.) JPT Aug., 999
OFFSHORE DRILLING: deflection tools and techniques in high-angle drilling, (Tech. Art.) JPT Apr., 469
dog-leg control in directionally drilled wells, JPT Jan., 107
floating rig: review of procedures after four years' experience, (Tech. Art.) JPT Feb., 167
OFFSHORE OPERATIONS: abandonment and salvage of deep water wells and structures, (Tech. Art.) JPT Mar., 287
drilling from floating vessels: use of bumper subs, JPT Dec., 1587
ocean floor wellhead arrangement for hydraulic oilwell pumping, (Tech. Art.) JPT Aug., 983
storm wave characteristics, SPEJ Mar., 87
structural design: application of oceanographic data, SPEJ Sept., 273
tubes: stresses at intersection; cross- and T-joints, JPT May, 695
undersea drilling and production sites for petroleum, (Tech. Art.) JPT Oct., 1309
OIL PRODUCTION: transient: calculation in a radial composite reservoir, SPEJ Dec., 355
OIL PROPERTIES: evaluations: tax consequences on investment yardsticks, (Tech. Art.) JPT Dec., 1547
OIL RECOVERY: high percentage: role of vaporization in pressure maintenance, JPT Feb., 245
OIL RESERVOIRS: performance when containing vertical fracture in the matrix, SPEJ June, 221
simulation of three-dimensional, two-phase flow, SPEJ Dec., 377
two-phase: undergoing gas injection; unsteady-state distributions of fluid compositions, SPEJ Mar., 61
OIL SATURATION: errors in core oil content data measured by the retort distillation method, (Tech. Art.) JPT June, 759
OIL SHALES: a look ahead at synthetic hydrocarbon technology, (Tech. Art.) JPT Oct., 1329
explosives research to improve flow through, (Tech. Art.) JPT Nov., 1431
naval reserves: management to maintain a potential, (Tech. Art.) JPT Mar., 297
recovering oil by retorting a nuclear chimney, (Tech. Art.) JPT June, 727
OIL WELLS: deep water: abandonment and salvage offshore, (Tech. Art.) JPT Mar., 287
in-place hydrocarbons: from pressure buildup test, (Tech. Art.) JPT July, 859
pressure buildup behavior in a two-well gas-oil system, SPEJ June, 195

OPTIMIZING TECHNIQUES: gas storage field development, (Tech. Art.) JPT Mar., 323
ORIENTATION: vertical fractures: study using instrumental approach, JPT Feb., 261; discussion, 266
ORKISZEWSKI, J.: *Predicting Two-Phase Pressure Drops in Vertical Pipes*, JPT June, 829
OTT, F. III and MORSE, J. V.: *Field Application of Unsteady-State Pressure Analyses in Reservoir Diagnosis*, (Tech. Art.) JPT July, 869
OXFORD, W. F., JR.: *Tubular Goods—Service Conditions and Performance*, (Tech. Art.) JPT May, 617
OXNARD FIELD: *See* California

P

PARAFFIN: deposition: improved inhibitor, (Tech. Art.) JPT Feb., 150
PATCHETT, J. G. and RAUSCH, R. W.: *An Approach to Determining Water Saturation in Shaly Sands*, JPT Oct., 1395
PATTERSON, G. K., et al: *Correlation of Drag Reduction With Modified Deborah Number for Dilute Polymer Solutions*, SPEJ Sept., 325
PENETRATION: indexed dull bit-tooth: into dry rock under confining pressure, JPT Sept., 1225
performance of circumferential-toothed rock bits; laboratory evaluation, JPT Jan., 113
rate: dynamic filtration during microbit drilling, JPT Sept., 1209
PENNSYLVANIA: steam flooding: economic appraisal for a field, (Tech. Art.) JPT Nov., 1437
PERCENTAGE GAIN: on investment: an investment decision yardstick, JPT May, 679; discussion, 686
PEREZ-ROSALES, C.: *A Simplified Method for Determining Specific Surface*, JPT Aug., 1081
PERFORMANCE PREDICTIONS: gas condensate fields: attempt to predict the time dependence of well deliverability, SPEJ June, 113
gas injection into reservoirs of differing volatilities and role of nitrogen, (Tech. Art.) JPT Nov., 1449
gas reservoir: practical application of a two-dimensional numerical model, (Tech. Art.) JPT Sept., 1127
Sunshine field, Louisiana: Marg Tex oil reservoir; using unsteady-state calculations, (Tech. Art.) JPT May, 595
Wesson field, Arkansas: waterflooding successful in Hogg Sand Unit, (Tech. Art.) JPT Jan., 35
PERMEABILITY: caprock: evaluating in aquifer gas storage for infinite thickness case, JPT July, 949
flushed: mobility control with polymer solutions, SPEJ June, 161; discussion, 170
isolated interferences: effects on sweep efficiency and conductivity of five-spot network, SPEJ Mar., 20
low: explosives research to improve flow through, (Tech. Art.) JPT Nov., 1431
porous media; preparation and testing to meet scaling requirements for gas reservoir modeling, SPEJ June, 189
successfully cycling a high-yield condensate reservoir, (Tech. Art.) JPT Jan., 41; discussion, 47
relative: three-phase; measurement using a nuclear magnetic resonance technique for estimating fluid saturation, SPEJ Sept., 235
sandstone: clay- or silt-blocked; effect of pressure drawdown on clean-up, JPT Mar., 397
stratified: cycling high-yield condensate reservoir successful, (Tech. Art.) JPT Jan., 41; discussion, 47
variable: controlled injection of sand consolidation plastic, (Tech. Art.) JPT Apr., 487
PETROLEUM: undersea drilling and production sites, (Tech. Art.) JPT Oct., 1309
PETROLEUM ECONOMICS: *See* Economics
PETROLEUM ENGINEERING: AIME annual meeting offers strong petroleum-mining program, (Tech. Art.) JPT Jan., 66
curricula: should special industry requirements be perpetuated in educational institutions? (Tech. Art.) JPT July, 909
enrollments continue to climb, (Tech. Art.) JPT Jan., 62
PETROLEUM ENGINEERS: recruiting: story of diminishing reserves, (Tech. Art.) JPT June, 737
report: application to financing, (Tech. Art.) JPT Feb., 187
PHASE BEHAVIOR: convergence pressure: critical composition method for calculating, SPEJ Mar., 54
PHYSICAL PROPERTIES: filler cements: a critique, (Tech. Art.) JPT Aug., 1011
porous media: correlations, SPEJ Sept., 266
tubular goods: service conditions and performance, (Tech. Art.) JPT May, 617
PICKETT, G. W.: *Techniques and Deflection Tools in High-Angle Drilling: Past, Present and Future*, (Tech. Art.) JPT Apr., 469
PICTURED CLIFFS GAS RESERVOIR: *See* New Mexico
PILOT STUDY: comparison of polymer flooding and waterflooding at Huntington Beach, California, (Tech. Art.) JPT Sept., 1103
Deerfield, Missouri: recovery by steam drive, JPT July, 956
five-spot: waterflood models, JPT Mar., 404
steam flooding: economic appraisal in a Pennsylvania field, (Tech. Art.) JPT Nov., 1437
Thermosludge water treating and steam generation process, (Tech. Art.) JPT Dec., 1537
PIPE: correlation of drag reduction with modified Deborah number for dilute polymer solutions, SPEJ Sept., 325
flow of Bingham plastic slurries within, SPEJ Dec., 342
service conditions and performance, (Tech. Art.) JPT May, 617
turbulent flow: general scale-up correlation for rheologically complex fluids, SPEJ Sept., 252
vertical: predicting two-phase pressure drop, JPT June, 829
PIPELINES: flow characteristics of thixotropic liquids: numerical predictions, SPEJ Dec., 369
horizontal: prediction of flow patterns, liquid holdup and pressure losses occurring during continuous two-phase flow, JPT June, 815
laminar-turbulent transition in suspension of rigid spheres, SPEJ Sept., 259
PIZZI, G., et al: *Water Drive Gas Reservoirs: Uncertainty in Reserves Evaluation From Past History*, JPT Feb., 237; discussion, JPT July, 965
PLANNING: visual path analysis, (Tech. Art.) JPT Feb., 177
PLANTS: nine in operation: Thermosludge water treating and steam generation process, (Tech. Art.) JPT Dec., 1537
PLASTICITY: theory: strain hardening of a porous limestone, SPEJ Sept., 229
PLASTICS: sand consolidation: controlled injection of, (Tech. Art.) JPT Apr., 487
PLATFORMS: abandonment and salvage: Hurricane Betsy, (Tech. Art.) JPT Mar., 287
storm wave characteristics predictions, SPEJ Mar., 87
PLUGGING: thief zones: water injection wells, (Tech. Art.) JPT Aug., 999
POLYETHYLENE: inhibitor: improved paraffin deposition, (Tech. Art.) JPT Feb., 150
POLYMERS: dilute solutions: correlation of drag reduction with modified Deborah number, SPEJ Sept., 325
drilling fluids: laboratory drilling rate and filtration studies, JPT May, 688
flooding with: comparison with waterflooding at Huntington Beach, California, (Tech. Art.) JPT Sept., 1103
rigid spheres: laminar-turbulent transition in suspension, SPEJ Sept., 259
solutions: flow through porous media, JPT Aug., 1065; discussion, 1072
mobility control with, SPEJ June, 161; discussion, 170
POROUS MEDIA: *See also* Reservoir Rocks
consolidated: dispersion coefficients for gases flowing in, SPEJ Mar., 43
correlations of physical properties, SPEJ Sept., 266
equations of motion of fluids: propagation velocity of pressure pulses, SPEJ Dec., 333
flow of polymer solutions through, JPT Aug., 1065; discussion, 1072
limestone: strain hardening, SPEJ Sept., 229
low permeability: preparation and testing to meet scaling requirements for gas reservoir modeling, SPEJ June, 189
rheological properties of pseudoplastic fluids, SPEJ June, 149; discussion, 159
specific surface: simplified method for determining, JPT Aug., 1081
POTTER, P. E. and BLAKELY, R. F.: *Generation of a Synthetic Vertical Profile of a Fluvial Sandstone Body*, SPEJ Sept., 243
POWER: earning: of engineers, (Tech. Art.) JPT Mar., 311
POWERS, L. W., et al: *Deerfield Pilot Test of Recovery by Steam Drive*, JPT July, 956
PRATT, D. R. and HANKS, R. W.: *On the Flow of Bingham Plastic Slurries in Pipes and Between Parallel Plates*, SPEJ Dec., 342

PRESSURE BEHAVIOR: dewpoint: correlation with fluid composition and temperature, SPEJ June, 99
elevated pore pressure: single-blow bit-tooth impact tests on saturated rocks under confining pressure, SPEJ Dec., 389
falloff tests: field application of unsteady-state analyses in reservoir diagnosis, (Tech. Art.) JPT July, 869
losses occurring during continuous two-phase flow in horizontal pipelines, JPT June, 815
pulses: propagation velocity; equations of motion of fluids in porous media, SPEJ Dec., 333
shut-in wellhead pressures: used in estimating gas-water contacts in aquifer gas storage, (Tech. Art.) JPT July, 877
vertical pipe: predicting two-phase pressure drops, JPT June, 829
PRESSURE BUILDUP: behavior in a two-well gas-oil system, SPEJ June, 195
in presence of radial discontinuities, SPEJ Sept., 301
tests: field application of unsteady-state pressure analyses in reservoir diagnosis, (Tech. Art.) JPT July, 869
new method for determining a well's in-place hydrocarbons, (Tech. Art.) JPT July, 859
PRESSURE DISTRIBUTION: performance of petroleum reservoirs containing vertical fractures in the matrix, SPEJ June, 221
PRESSURE DRAWDOWN: in presence of radial discontinuities, SPEJ Sept., 301
sandstone, clay- or silt-blocked: effect on clean-up, JPT Mar., 397
PRESSURE GRADIENTS: thixotropic liquids: numerical predictions of pipeline flow characteristics, SPEJ Dec., 369
PRESSURE MAINTENANCE: See Gas and LPG Injection, Miscible Displacement and Waterflooding
gas cycling: low-permeability, high-yield condensate reservoir operation successful, (Tech. Art.) JPT Jan., 41; discussion, 47
role of vaporization in high-percentage oil recovery, JPT Feb., 245
gas injection into reservoirs of differing volatilities, (Tech. Art.) JPT Nov., 1449
water: McComb field, Mississippi; case history of operations, (Tech. Art.) JPT Apr., 457
PRESSURE TRANSIENTS: in presence of radial discontinuities, SPEJ Sept., 301
PRESTON, F. W., et al: *Preparation and Testing of Low Permeability Porous Media To Meet Scaling Requirements for Gas Reservoir Modeling*, SPEJ June, 189
Professional Contemporizing: A Personal Challenge, (Tech. Art.) JPT Sept., 1113
PRICE, H. S. and DONOHUE, D. A. T.: *Isothermal Displacement Processes With Interphase Mass Transfer*, SPEJ June, 205
PROBABILITY: storm wave characteristics: predictions by, SPEJ Mar., 87
PROCESSING: log data by computer: improves production in Chaveroo field, New Mexico, (Tech. Art.) JPT July, 889
PRODUCTION: at constant well pressure: some approximate solutions of radial flow problems, SPEJ Mar., 31
Chaveroo field, New Mexico: computer processing of log data improves, (Tech. Art.) JPT July, 889
hydrocarbons: by 1980, (Tech. Art.) JPT Oct., 1325
from coal; progress in conversion, (Tech. Art.) JPT Oct., 1345
oil: mining at Athabasca is new approach, (Tech. Art.) JPT Oct., 1337
undersea sites for petroleum, (Tech. Art.) JPT Oct., 1309
PRODUCTION OPERATIONS: *See also* the specific operation
commingling: shared-time net oil measurement, (Tech. Art.) JPT Dec., 1527
dynamometer cards diagnosed by computer, JPT Jan., 97
gas: better investment planning by computer simulation, (Tech. Art.) JPT Feb., 157
gas lift: liquid slug flow; analytical description in small-diameter vertical conduits, JPT Mar., 419
hydraulic oilwell pumping: ocean floor wellhead arrangement, (Tech. Art.) JPT Aug., 983
paraffin: improved inhibitor, (Tech. Art.) JPT Feb., 150
tubular connections: new technology for improved performance, (Tech. Art.) JPT Mar., 337
PRODUCTIVITY: wells in vertically fractured, damaged formations, JPT Jan., 120
PROFESSIONAL SOCIETIES: AIME: actions of the board, (Tech. Art.) JPT Apr., 512 and (Tech. Art.) JPT Aug., 1035
engineering: congressman challenges to advise government on technical matters, (Tech. Art.) JPT May, 653
PROFESSIONALISM: contemporizing: a personal challenge, (Tech. Art.) JPT Sept., 1113
development of engineers as managers, (Tech. Art.) JPT Jan., 11
engineers: earning power of, (Tech. Art.) JPT Mar., 311
PROJECT GASBUGGY: status report, (Tech. Art.) JPT Oct., 1319
PROPPING AGENTS: horizontal fractures: computer study of treatment design, JPT Apr., 559
PUBLIC RELATIONS: AIME and oil industry program, (Tech. Art.) JPT Nov., 1475
PUMPING WELLS: dynamometer cards diagnosed by computer to determine conditions, JPT Jan., 97
hydraulic: ocean floor wellhead arrangement, (Tech. Art.) JPT Aug., 983
unsteady-state pressure analyses of buildup and falloff tests in reservoir diagnosis, (Tech. Art.) JPT July, 869
PUMPS: dynamometer cards diagnosed by computer to determine displacement conditions and intake pressures, JPT Jan., 97

R

RALPH, R. G., et al: *Ocean Floor Wellhead Arrangement for Hydraulic Oilwell Pumping*, (Tech. Art.) JPT Aug., 983
RAMEY, H. J., JR., and SNYDER, R. W.: *Application of Buckley-Leverett Displacement Theory to Noncommunicating Layered Systems*, JPT Nov., 1500
RATHMELL, J. J.: *Errors in Core Oil Content Data Measured by the Retort Distillation Method*, (Tech. Art.) JPT June, 759
RATLIFF, N. W. and CLOSMANN, P. J.: *Calculation of Transient Oil Production in a Radial Composite Reservoir*, SPEJ Dec., 355
RAUSCH, R. W. and PATCHETT, J. G.: *An Approach to Determining Water Saturation in Shaly Sands*, JPT Oct., 1395
RAYMOND, L. R. and BINDER, G. G., JR.: *Productivity of Wells in Vertically Fractured, Damaged Formations*, JPT Jan., 120
RAZA, S. H. and MARSDEN, S. S.: *The Streaming Potential and the Rheology of Foam*, SPEJ Dec., 359
RECOVERY METHODS: *See also* Oil Recovery, Secondary Recovery and Thermal Recovery of Oil
mining: Athabasca tar sands, Canada: new approach to oil production, (Tech. Art.) JPT Oct., 1337
RECRUITING: petroleum: story of diminishing reserves, (Tech. Art.) JPT June, 737
REDWATER FIELD: *See* Canada
REGULATORY PRACTICES: commingling operations: shared-time net oil measurement, (Tech. Art.) JPT Dec., 1527
federal: producing segment of gas industry, (Tech. Art.) JPT Jan., 23
REICHMUTH, D. R., et al: *Circumferential-Toothed Rock Bits — A Laboratory Evaluation of Penetration Performance*, JPT Jan., 113
RELATIVE PERMEABILITY: *See* Permeability: relative
RESEARCH: fuel cells: progress in developing for commercial use, (Tech. Art.) JPT June, 749
hydrocarbons from coal: progress in the conversion, (Tech. Art.) JPT Oct., 1345
RESERVES: naval petroleum and oil shale: management to maintain a potential, (Tech. Art.) JPT Mar., 297
petroleum engineers: recruiting in 1966 indicates diminishing numbers, (Tech. Art.) JPT June, 737
petroleum engineer's report: application to financing, (Tech. Art.) JPT Feb., 187
water drive gas reservoirs: evaluation uncertain from past history, JPT Feb., 237; discussion, JPT July, 965
RESERVOIR ANALYSIS: *See also* Performance Predictions
bottom-hole pressure in gas wells: calculation for flowing and static conditions, (Tech. Art.) JPT July, 897
mathematical model of reservoir response during the cyclic injection of steam, SPEJ June, 174
unsteady-state pressure: field application, (Tech. Art.) JPT July, 869
RESERVOIR ENGINEERING: *See* Reservoir Mechanics
RESERVOIR MECHANICS: gas reservoir: practical application of a two-dimensional numerical model, (Tech. Art.) JPT Sept., 1127
vertical fractures in matrix: performance, SPEJ June, 221
RESERVOIR ROCKS: *See also* Porous Media

caprock: slightly permeable and of infinite thickness; evaluating in aquifer gas storage, JPT July, 949
compression, axial and uniform: mode conversion technique employed in shear wave velocity studies, SPEJ June, 136
dry and under confining pressure: study of indexed dull bit-tooth penetration, JPT Sept., 1225
failure characteristics: effect of hardness reducers, SPEJ Sept., 295; discussion, 299
hydraulic fracture: initiation and extension, SPEJ Sept., 310
limestone and shales: cutting action of a single diamond under simulated borehole conditions, JPT July, 937
pore and elastic properties under triaxial stress condition: simultaneous measurement, SPEJ Sept., 283
saturated: single-blow bit-tooth impact tests under confining pressure; elevated pore pressure, SPEJ Dec., 389
saturation effect on mobility of low liquid-vapor ratio fluids, SPEJ Mar., 11
softening: laboratory study of means of prevention during steam or hot water injection, JPT May, 703
specific surface: determining by a simplified method, JPT Aug., 1081
RESERVOIR SIMULATION: computer: better investment planning of gas-producing operations, (Tech. Art.) JPT Feb., 157
evaluating uncertainty in engineering calculations, JPT Dec., 1595
fluvial sandstone body: generation of a synthetic vertical profile, SPEJ Sept., 243
oil and gas: three-dimensional, two-phase flow, SPEJ Dec., 377
RESERVOIR STIMULATION: explosives research: improves flow through low-permeability rock, (Tech. Art.) JPT Nov., 1431
fracture treatment: computer study of horizontal design, JPT Apr., 559
RESERVOIRS: *See also* type, such as, Bottom-Water Drive, Solution-Gas Drive, and Water Drive and specific names
RHEOLOGY: Bingham plastic slurries: flow in pipes and between parallel plates, SPEJ Dec., 342
colloid: laminar-turbulent transition in suspension of rigid spheres, SPEJ Sept., 259
complex fluids: general turbulent pipe flow scale-up correlation, SPEJ Sept., 252
foam: and the streaming potential, SPEJ Dec., 359
mobility control with polymer solutions, SPEJ June, 161; discussion, 170
numerical prediction of pipeline flow characteristics, SPEJ Dec., 369
properties: pseudoplastic fluids in porous media, SPEJ June, 149; discussion, 159
RICHARDSON, J. G. and COATS, K. H.: *Calculation of Water Displacement by Gas in Development of Aquifer Storage*, SPEJ June, 105
RITTER, R. A. and BATYCKY, J. P.: *Numerical Prediction of the Pipeline Flow Characteristics of Thixotropic Liquids*, SPEJ Dec., 369
ROBERTSON, J. O., JR., and OEFELEIN, F. H.: *Plugging Thief Zones in Water Injection Wells* (Tech. Art.) JPT Aug. 999
ROBINSON, L. H.: *Effect of Hardness Reducers on Failure Characteristics of Rock*, SPEJ Sept., 295; discussion, 299
ROBINSON, R. J., et al: *Storm Wave Characteristics*, SPEJ Mar., 87
ROCK MECHANICS: cutting action of a single diamond under simulated borehole conditions, JPT July, 937
explosives research: improves flow through low-permeability rock, (Tech. Art.) JPT Nov., 1431
failure characteristics of rocks: effect of hardness reducers, SPEJ Sept., 295; discussion, 299
measurement simultaneously of pore and elastic properties under triaxial stress conditions, SPEJ Sept., 283
penetration: of indexed dull bit-tooth into dry rock under confining pressure, JPT Sept., 1225
rate; dynamic filtration during microbit drilling, JPT Sept., 1209
strain hardening of a porous limestone, SPEJ Sept., 229
ROCK PROPERTIES: core data: statistically analyzing, (Tech. Art.) JPT Apr., 497
correlations for porous media, SPEJ Sept., 266
failure characteristics: effect of hardness reducers, SPEJ Sept., 295; discussion, 299
fracture orientation: study using instrumental approach, JPT Feb., 261; discussion, 266
measurement simultaneously of pore and elastic properties under triaxial stress conditions, SPEJ Sept., 283
ROCKS: *See* Reservoir Rocks
ROCKY MOUNTAIN SANDS: water saturation: approach to determining in shaly sands, JPT Oct., 1395
RODRIGUEZ, J. M., et al: *Corelation of Drag Reduction With Modified Deborah Number for Dilute Polymer Solutions*, SPEJ Sept., 325
ROWE, A. M.: *The Critical Composition Method—A New Convergence Pressure Method*, SPEJ Mar., 54
RUDAC SYSTEM: procedures: review after four years' experience in floating drilling, (Tech. Art.) JPT Feb., 167
RYAN, R. and OBORN, R. W.: *Case History of Aquifer Gas Storage Development in a Silurian Dolomite at Glasford, Illinois*, (Tech. Art.) JPT Sept., 1119
RYAN, R., et al: *Estimating Gas-Water Contact in Aquifer Gas Storage Fields Using Shut-In Wellhead Pressures*, (Tech. Art.) JPT July, 877

S

SADIQ, S., et al: *Preparation and Testing of Low Permeability Porous Media To Meet Scaling Requirements for Gas Reservoir Modeling*, SPEJ June, 189
SAND: shaly: an approach to determining water saturation, JPT Oct., 1395
SAND CONTROL: injection of sand consolidation plastic, (Tech. Art.) JPT Apr., 487
wireline completion technique, (Tech. Art.) JPT June, 741
SANDIFORD, B. B.: *Discussion on Flow of Polymer Solutions Through Porous Media*, JPT Aug., 1072
SANDIFORD, B. B., et al: *Discussion on Mobility Control With Polymer Solutions*, SPEJ June, 170
SANDREA, R. J. and FAROUQ ALI, S. M.: *The Effects of Isolated Permeability Interferences on the Sweep Efficiency and Conductivity of a Five-Spot Network*, SPEJ Mar., 20
SANDSTONES: clay- or silt-blocked: effect of pressure drawdown on clean-up, JPT Mar., 397
fluvial: generation of a synthetic vertical profile, SPEJ Sept., 243
laboratory drilling rate and filtration studies of emulsion drilling fluids, JPT July, 943
physical properties: correlations, SPEJ Sept., 266
three-phase relative permeability measurement using a nuclear magnetic resonance technique for estimating fluid saturation, SPEJ Sept., 235
SARAF, D. N. and FATT, I.: *Three-Phase Relative Permeability Measurement Using a Nuclear Magnetic Resonance Technique for Estimating Fluid Saturation*, SPEJ Sept., 235
SAREM, A. M.: *Discussion on Rheological Properties of Pseudoplastic Fluids in Porous Media*, SPEJ June, 159
SAREM, A. M., et al: *Discussion on Mobility Control With Polymer Solutions*, SPEJ June, 170
SATURATION: condensate: effect on mobility of low liquid-vapor ratio fluids, SPEJ Mar., 11
SCALE: control: design techniques for chemical fracture-squeeze treatments, JPT Nov., 1493
deposition: unique characteristics of barium sulfate, JPT Oct., 1381
SCALING: gas reservoir: preparation and testing of low-permeability porous media to meet requirements for modeling, SPEJ June, 189
SCHOEMAKER, R. P.: *Visual Path Analysis*, (Tech. Art.) JPT Feb., 177
SCIENCE: mineral: NAS-NRC concerned over slow advances, (Tech. Art.) JPT Feb., 215
SECONDARY RECOVERY: *See also* Gas Injection, Miscible Displacement, Thermal Recovery of Oil and Waterflooding
Spraberry Trend Area field, Texas: E. T. O'Daniel project is successful flood, (Tech. Art.) JPT Sept., 1137
waterflooding: treating and completing water injection wells in Wilmington field, California, (Tech. Art.) JPT Jan., 49
wettability alteration flooding: determination of chemical requirements and applicability, JPT June, 839
SEWELL, F. D. and WEINER, P. D.: *New Technology for Improved Tubular Connection Performance*, (Tech. Art.) JPT Mar., 337
SHALE OILS: *See* Oil Shales
SHALES: cutting action of a single diamond under simulated borehole conditions, JPT July, 937
density: measuring and using as aid in drilling wells in high-pressure areas, (Tech. Art.) JPT Nov., 1423

SILBERBERG, I. H., et al: *The Prediction of Flow Patterns, Liquid Holdup and Pressure Losses Occurring During Continuous Two-Phase Flow in Horizontal Pipelines*, JPT June, 815

SILICIC ACID GEL: plugging thief zones in water injection wells, (Tech. Art.) JPT Aug., 999

SIMPSON, J. P., et al: *Laboratory Drilling Rate and Filtration Studies of Clay and Polymer Drilling Fluids*, JPT May, 688

Laboratory Drilling Rate and Filtration Studies of Emulsion Drilling Fluids, JPT July, 943

SLUG PROCESS: LPG: laboratory study of improved water-driven type, SPEJ Sept., 319

SLURRIES: Bingham plastic: flow in pipes and between parallel plates, SPEJ Dec., 342

cement: method for calculating circulating temperatures, JPT Nov., 1507

SMITH, D. K. and MURPHY, W. C.: *A Critique of Filler Cements*, (Tech. Art.) JPT Aug., 1011

SNYDER, R. W. and RAMEY, H. J., JR.: *Application of Buckley-Leverett Displacement Theory to Noncommunicating Layered Systems*, JPT Nov., 1500

SOCIETY OF PETROLEUM ENGINEERS: computer symbols: subcommittee proposes new standard, (Tech. Art.) JPT May, 629

engineering appraisals: committee report, (Tech. Art.) JPT Feb., 193

SOLUTION-GAS DRIVE: pressure buildup behavior in a two-well gas-oil system, SPEJ June, 195

SOMERTON, W. H. and WILHELMI, B.: *Simultaneous Measurement of Pore and Elastic Properties of Rocks Under Triaxial Stress Conditions*, SPEJ Sept., 283

SPECIFIC SURFACE: determining by a simplified method, JPT Aug., 1081

SPECTRAL ANALYSIS: storm waves, SPEJ Mar., 87

SPENCER, G. B., et al: *The Role of Vaporization in High Percentage Oil Recovery by Pressure Maintenance*, JPT Feb., 245

SPRABERRY TREND AREA FIELD: *See* Texas

SPRAGINS, F. K.: *Mining at Athabasca — A New Approach to Oil Production*, (Tech. Art.) JPT Oct., 1337

STABER, G. I. and COCHRAN, N. P.: *Progress in Producing Useful Hydrocarbons From Coal*, (Tech. Art.) JPT Oct., 1345

STAHL, E. J. and ANDERSON, T. O.: *A Study of Induced Fracturing Using an Instrumental Approach*, JPT Feb., 261; discussion, 266

STANDARDIZATION: computer symbols: SPE subcommittee proposes new standard, (Tech. Art.) JPT May, 629

STARRATT, F. E., et al: *Applying an Information Retrieval System to Well Data*, (Tech. Art.) JPT Aug., 1005

STATISTICS: core data: analyzing, (Tech. Art.) JPT Apr., 497

specific surface determined by simplified method, JPT Aug., 1081

STEAM FLOODING: *See* Thermal Recovery of Oil

STEAM INJECTION: *See* Injection: steam, and Thermal Recovery of Oil

STIMULATION: *See* Reservoir and Well Stimulation, and the specific process

STOCKMAN, F. D., et al: *Professional Contemporizing: A Personal Challenge*, (Tech. Art.) JPT Sept., 1113

STONER, O. E. and JEFFUS, D. M.: *Abandonment and Salvage of Deep Water Wells and Structures*, (Tech. Art.) JPT Mar., 287

STORAGE: well data: applying an information retrieval system, (Tech. Art.) JPT Aug., 1005

STORAGE FACILITIES: *See* Underground Storage

STRATIFICATION: *See* Permeability, stratified

STRATIGRAPHY: fluvial sandstone body: generation of a synthetic vertical profile, SPEJ Sept., 243

STREAMING POTENTIAL: foam, SPEJ Dec., 359

STRESSES: at intersection of tubes: cross- and T-joints, JPT May, 695

triaxial: during simultaneous measurement of pore and elastic properties of rocks, SPEJ Sept., 283

STROHM, P. J., et al: *Controlled Injection of Sand Consolidation Plastic*, (Tech. Art.) JPT Apr., 487

SUBSURFACE: waters: methods for treating, (Tech. Art.) JPT Dec., 1531

SUCKER RODS: dynamometer cards diagnosed by computer to determine load displacement, JPT Jan., 97

SUMNER, E. F. and EILERTS, C. K.: *Integration of Partial Differential Equations for Multicomponent, Two-Phase Transient Radial Flow*, SPEJ June, 125

SUNSHINE FIELD: *See* Louisiana

SUPPLY AND DEMAND: for engineers and scientists, (Tech. Art.) JPT Mar., 311

hydrocarbons by 1980, (Tech. Art.) JPT Oct., 1325

mining, metals and petroleum engineers, (Tech. Art.) JPT June, 778

SURFACE: waters: methods for treating, (Tech. Art.) JPT Dec., 1531

SWEARINGEN, W. E.: *So You Want To Be a Manager?* (Tech. Art.) JPT Jan., 11

SWEEP EFFICIENCY: five-spot network: effects of isolated permeability interferences, SPEJ Mar., 20

SWIFT, G. W., et al: *Preparation and Testing of Low Permeability Porous Media To Meet Scaling Requirements for Gas Reservoir Modeling*, SPEJ June, 189

SYMBOLS: computer: SPE subcommittee proposes new standard, (Tech. Art.) JPT May, 629

T

TADE, M. D.: *Helium Storage in Cliffside Field*, (Tech. Art.) JPT July, 885

TAR SANDS: a look ahead at synthetic hydrocarbon technology, (Tech. Art.) JPT Oct., 1329

Oxnard field, California: cyclic steam project in virgin reservoir, (Tech. Art.) JPT May, 585

TAXATION: consequences on investment yardsticks in oil property evaluations, (Tech. Art.) JPT Dec., 1547

TAYLOR, R. W.: *Actions of the AIME Board*, (Tech. Art) JPT Aug., 1035

Actions of the Board, (Tech. Art.) JPT Apr., 512

AIME Annual Meeting Offers Strong Petroleum-Mining Program, (Tech. Art.) JPT Jan., 66

Endowments, Image and Manpower, (Tech. Art.) JPT Nov., 1475

NAS-NRC Concerned Over Slow Advances in Mineral Science and Technology, (Tech. Art.) JPT Feb., 215

Should Special Curricula in Mining, Metallurgical and Petroleum Engineering Be Perpetuated? (Tech. Art.) JPT July, 909

The Employment Outlook for Engineers — Particularly in Mining, Metals and Petroleum, (Tech. Art.) JPT June, 778

1968 Annual Meeting Attendance — The Guessing Game, (Tech. Art.) JPT Oct., 1369

TEAPOT DOME: *See* Wyoming

TECHNICAL OBSOLESCENCE: professional contemporizing: a personal challenge, (Tech. Art.) JPT Sept., 1113

TEMPERATURE: average: effect of assumptions on bottom-hole pressure calculations in gas wells, JPT Apr., 547

circulating: method for calculating, JPT Nov., 1507

computer calculations of effect on length of tubular goods during deep well stimulation, JPT Apr., 551; discussion, JPT Aug., 1085

correlation with dewpoint pressure and fluid composition, SPEJ June, 99

high: flow properties of water-base drilling fluids, Aug., 1074

surveys: analytical and interpretive problems, (Tech. Art.) JPT Aug., 993

TERHUNE, M. H., et al: *Simulation of Three-Dimensional, Two-Phase Flow in Oil and Gas Reservoirs*, SPEJ Dec., 377

TESTING: Allegheny field, New York: induced fracturing studied using instrumental approach, JPT Feb., 261; discussion, 266

bit: single-blow tooth impact tests on saturated rocks under confining pressure; elevated pore pressure, SPEJ Dec., 389

hydrostatic and triaxial: strain hardening of a porous limestone, SPEJ Sept., 229

porous media: low permeability; to meet scaling requirements for gas reservoir modeling, SPEJ June, 189

pressure drawdown and buildup: presence of radial discontinuities, SPEJ Sept., 301

Project Gasbuggy: status report, (Tech. Art.) JPT Oct., 1319

TEXAS: Clay County: field observations compared with model calculations for gas storage and gas cycling project, SPEJ Mar., 31

Cliffside field: helium storage, (Tech. Art.) JPT July, 885

Delaware basin: well stimulation: computer calculations of pressure and temperature effects on length of tubular goods, JPT Apr., 551; discussion, JPT Aug., 1085

Delaware-Val Verde basins: Ellenburger gas wells; study of stimulation results, (Tech. Art.) JPT Aug., 1017

Headlee Devonian field: cycling a low-permeability, high-yield condensate reservoir successfully, (Tech. Art.) JPT Jan., 41; discussion, 47
Spraberry Trend Area field: E. T. O'Daniel project a successful flood, (Tech. Art.) JPT Sept., 1137
well's in-place hydrocarbons: determined from pressure build-up test, (Tech. Art.) JPT July, 859
THERMAL RECOVERY OF OIL: oil shale: recovering oil by retorting a nuclear chimney, (Tech. Art.) JPT June, 727
steam: and hot water; injection wells; over-all heat transfer coefficients, (Tech. Art.) JPT May, 607
cyclic project in virgin tar reservoir, (Tech. Art.) JPT May, 585
Deerfield, Missouri, pilot test of recovery, JPT July, 956
economic appraisal in a Pennsylvania field, (Tech. Art.) JPT Nov., 1437
injection wells; design criteria for completion, (Tech. Art.) JPT Jan., 15; discussion, JPT June, 765
mathematical model of reservoir response during cyclic injection, SPEJ June, 174
or hot water injection; laboratory study of rock softening and means of prevention, JPT May, 703
theoretical analysis of stimulation, JPT Mar., 411
use of an insulating fluid for casing protection, (Tech. Art.) JPT Nov., 1453
zone growth in multiple-layer system, SPEJ Mar., 1
Thermosludge water treating and steam generation process, (Tech. Art.) JPT Dec., 1537
THERMOSLUDGE PROCESS: water treating and steam generation, (Tech. Art.) JPT Dec., 1537
THIXOTROPHY: pipeline flow characteristics: numerical prediction, SPEJ Dec., 369
THOMPSON, J. L.: *A Laboratory Study of an Improved Water-Driven LPG Slug Process*, SPEJ Sept., 319
TIGRE LAGOON FIELD: *See* Louisiana
TIMMERMAN, E. H.: *Federal Gas Regulation and the Producing Segment of the Gas Industry*, (Tech. Art.) JPT Jan., 23
TINSLEY, J. M., et al: *Design Techniques for Chemical Fracture-Squeeze Treatments*, JPT Nov., 1493
TOPRAC, A. A.: *Stresses at Intersection of Tubes: Cross- and T-Joint*, JPT May, 695
TRACERS: Deerfield, Missouri: used in pilot test of recovery by steam drive, JPT July, 956
surveys: analytical and interpretive problems, (Tech. Art.) JPT Aug., 993
TRAGESSER, A. F., et al: *A Method for Calculating Circulating Temperatures*, JPT Nov., 1507
TRAINING: professional contemporizing: a personal challenge, (Tech. Art.) JPT Sept., 1113
TRANSIENT FLOW: two-phase, radial: integration of partial differential equations for multicomponent systems, SPEJ June, 125
TRANSIENTS: oil production: calculation in a radial composite reservoir, SPEJ Dec., 355
TRANSITION ZONE: laminar-turbulent: suspension of rigid spheres, SPEJ Sept., 259
TREATING AGENTS: for surface and subsurface waters, (Tech. Art.) JPT Dec., 1531
TRUDGEN, P. and HOFFMANN, F.: *Statistically Analyzing Core Data*, (Tech. Art.) JPT Apr., 497
TUBULAR GOODS: *See also* various types
length: computer calculations of pressure and temperature effects during deep well stimulation, JPT Apr., 551; discussion, JPT Aug., 1085
new technology for improved connection performance, (Tech. Art.) JPT Mar., 337
service conditions and performance, (Tech. Art.) JPT May, 617
tubes: stresses at intersection; cross- and T-joints, JPT May, 695
TURBULENT FLOW: pipe: general scale-up correlation for rheologically complex fluids, SPEJ Sept., 252
tube: correlation of drag reduction with modified Deborah number for dilute polymer solutions, SPEJ Sept., 325

U

UNCERTAINTY: evaluating in engineering calculations, JPT Dec., 1595
UNDERGROUND EXPLOSIONS: oil shale: recovering oil by retorting a nuclear chimney, (Tech. Art.) JPT June, 727
Project Gasbuggy: status report, (Tech. Art.) JPT Oct., 1319
UNDERGROUND STORAGE: gas, aquifer: calculation of water displacement by gas, SPEJ June, 105
case history of development in Silurian dolomite at Glasford, Illinois, (Tech. Art.) JPT Sept., 1119
evaluating a slightly permeable caprock of infinite thickness, JPT July, 949
estimating gas-water contacts in fields using shut-in wellhead pressures, (Tech. Art.) JPT July, 877
helium: Cliffside field, Texas, (Tech. Art.) JPT July, 885
UNDERSATURATED RESERVOIR: Sunshine field, Louisiana: performance predictions of Marg Tex oil reservoir using unsteady-state calculations, (Tech. Art.) JPT May, 595
UNDERWATER: drilling and production sites for petroleum, (Tech. Art.) JPT Oct., 1309
floating drilling: review of procedures after four years' experience, (Tech. Art.) JPT Feb., 167
UNITIZATION: McComb field, Mississippi: water pressure maintenance operation; case history, (Tech. Art.) JPT Apr., 457
planning by visual path analysis, (Tech. Art.) JPT Feb., 177
USTICK, R. E. and HILLHOUSE, J. D.: *Comparison of Polymer Flooding and Waterflooding at Huntington Beach, California*, (Tech. Art.) JPT Sept., 1103
UTAH: naval oil shale reserves: management to maintain a potential, (Tech. Art.) JPT Mar., 297

V

VALLEROY, V. V., et al: *Deerfield Pilot Test of Recovery by Steam Drive*, JPT July, 956
VALUATIONS: *See* Evaluations
VAN POOLLEN, H. K. and BIXEL, H. C.: *Pressure Drawdown and Buildup in the Presence of Radial Discontinuities*, SPEJ Sept., 301
VAPORIZATION: pressure maintenance: role in high-percentage oil recovery, JPT Feb., 245
VELOCITY: propagation: pressure pulses; equations of motion of fluids in porous media, SPEJ Dec., 333
shear wave: mode conversion technique employed in studies of rock samples under axial and uniform compression, SPEJ June, 136
VISCOSITY: lowering: steam injection in multiple-layer zone, SPEJ Mar., 1
methane: from 100 to 460F and 200 to 10,000 psia, SPEJ Mar., 75
microbit studies of effect on drilling rate, JPT Apr., 541
VOGEL, L. C., et al: *Effect of Pressure Drawdown on Clean-Up of Clay- or Silt-Blocked Sandstone*, JPT Mar., 397
VOLATILE OILS: gas injection pressure maintenance, (Tech. Art.) JPT Nov., 1449
VON GONTEN, W. D. and WHITING, R. L.: *Correlations of Physical Properties of Porous Media*, SPEJ Sept., 266

W

WADE, J. E.: *Techniques for Treating and Completing Water Injection Wells in California*, (Tech. Art.) JPT Jan., 49
WALSTROM, J. E., et al: *Evaluating Uncertainty in Engineering Calculations*, JPT Dec., 1595
WANSBROUGH, R. S.: *Discussion on Percentage Gain on Investment — An Investment Decision Yardstick*, JPT May, 686
WARD, D. C. and ATKINSON, C. H.: *Project Gasbuggy — Status Report*, (Tech. Art.) JPT Oct., 1319
WATER DRIVE: gas reservoirs: uncertainty in reserves evaluation from past history, JPT Feb., 237; discussion, JPT July, 965
Sunshine field, Louisiana: performance predictions of Marg Tex oil reservoir using unsteady-state calculations, (Tech. Art.) JPT May, 595
WATER INFLUX: Sunshine field, Louisiana: performance predictions of Marg Tex oil reservoir using unsteady-state calculations, (Tech. Art.) JPT May, 595
WATER INJECTION: *See* Waterflooding
WATER SATURATION: shaly sands: an approach to determining, JPT Oct., 1395
WATER TREATING: methods: surface and subsurface, (Tech. Art.) JPT Dec., 1531
Thermosludge and steam generation process, (Tech. Art.) JPT Dec., 1537
WATERFLOODING: comparison with polymer flooding at Huntington Beach, California, (Tech. Art.) JPT Sept., 1103
core oil content: errors in data measured by the retort distillation method, (Tech. Art.) JPT June, 759

driving LPG slug: laboratory study of improved process, SPEJ Sept., 319
injection wells: plugging thief zones, (Tech. Art.) JPT Aug., 999
McComb field, Mississippi: case history of pressure maintenance operations, (Tech. Art.) JPT Apr., 457
noncommunicating layered systems: application of Buckley-Leverett displacement theory, JPT Nov., 1500
pilot: model studies of, JPT Mar., 404
polymer solutions: flow through porous media, JPT Aug., 1065; discussion, 1072
Spraberry Trend Area field, Texas: E. T. O'Daniel project is successful flood, (Tech. Art.) JPT Sept., 1137
unsteady-state pressure analyses of buildup and falloff tests in reservoir diagnosis, (Tech. Art.) JPT July, 869
Wesson field, Arkansas: successful prediction and performance in Hogg Sand Unit, (Tech. Art.) JPT Jan., 35
wettability alteration: determination of chemical requirements and applicability, JPT June, 839
Wilmington field, California: treating and completing water injection wells, (Tech. Art.) JPT Jan., 49

WAVE ACTION: oceanographic data: application in offshore structural design, SPEJ Sept., 273
storm wave characteristics, SPEJ Mar., 87

WEAVER, R. H. and KEHLE, R. O.: *Discussion on A Study of Induced Fracturing Using an Instrumental Approach*, JPT Feb., 266

WEBER, A. G., et al: *Simulation of Three-Dimensional, Two-Phase Flow in Oil and Gas Reservoirs*, SPEJ Dec., 377

WEINAUG, C. F.: *Discussion on Successfully Cycling a Low-Permeability, High-Yield Gas Condensate Reservoir*, (Tech. Art.) JPT Jan., 47

WEINER, P. D. and SEWELL, F. D.: *New Technology for Improved Tubular Connection Performance*, (Tech. Art.) JPT Mar., 337

WEINTRITT, D. J. and COWAN, J. C.: *Unique Characteristics of Barium Sulfate Scale Deposition*, JPT Oct., 1381

WELL COMPLETION: *See also* specific types and Well Stimulation
Ellenburger gas wells: Delaware-Val Verde basins, (Tech. Art.) JPT Aug., 1017
horizontal fractures: computer study of treatment design, JPT Apr., 559
ocean floor wellhead arrangement for hydraulic oilwell pumping, (Tech. Art.) JPT Aug., 983
Oxnard field, California: cyclic steam project in virgin tar reservoir, (Tech. Art.) JPT May, 585
sand consolidation: field results of controlled injection of plastic, (Tech. Art.) JPT Apr., 487
sand control: wireline technique, (Tech. Art.) JPT June, 741
steam injection: design criteria, (Tech. Art.) JPT Jan., 15; discussion, JPT June, 765
use of an insulating fluid for casing protection, (Tech. Art.) JPT Nov., 1453
tubular goods: new technology for improved connection performance, (Tech. Art.) JPT Mar., 337
Wilmington field, California: techniques for water injection wells, (Tech. Art.) JPT Jan., 49

WELL LOGGING: computer processing of log data improves production in Chaveroo field, New Mexico, (Tech. Art.) JPT July, 889
neutron lifetime log: advances in, (Tech. Art.) JPT Apr., 479
production: analytical and intepretive problems, (Tech. Art.) JPT Aug., 1967, 993

WELL PATTERN: five-spot: effects of isolated permeability interferences on sweep efficiency and conductivity, SPEJ Mar., 20

WELL PERFORMANCE: *See also* Wellbore Mechanics
pressure drops: predicting for two-phase fluid in vertical pipe, JPT June, 829

WELL STIMULATION: *See also* Formation Fracturing
chemical fracture-squeeze treatments: design techniques, JPT Nov., 1493
deep: computer calculations of pressure and temperature effects on length of tubular goods, JPT Apr., 551; discussion, JPT Aug., 1085
during steam or hot water injection: laboratory study of rock softening and means of prevention, JPT May, 703
Ellenburger gas wells: Delaware-Val Verde basins; study of results, (Tech. Art.) JPT Aug., 1017
fracturing: vertical; productivity of wells in damaged formations, JPT Jan., 120
steam: theoretical analysis, JPT Mar., 411

WELL WORKOVERS: *See* Workovers

WELLBORE: temperatures: method for calculating during mud circulation, JPT Nov., 1507

WELLBORE MECHANICS: heat loss: over-all heat transfer coefficients in steam and hot water injection wells, (Tech. Art.) JPT May, 607
hydraulic fractures: initiation and extension in rocks, SPEJ Sept., 310

WESSON FIELD: *See* Arkansas

WEST COAST SANDS: water saturation: approach to determining in shaly sands, JPT Oct., 1395

WEST DELTA BLOCK 117: *See* Louisiana

WEST TEXAS: tubular goods: high-pressure service and performance, (Tech. Art.) JPT May, 617

WETTABILITY: alteration flooding: determination of chemical requirements and applicability, JPT June, 839

WHITAKER, W. W., et al: *Displacement Mechanics in Primary Cementing*, JPT Feb., 251

WHITFIELD, M. A., et al: *Computer Calculations of Pressure and Temperature Effects on Length of Tubular Goods During Deep Well Stimulation*, JPT Apr., 551; discussion, JPT Aug., 1085

WHITING, R. L. and VON GONTEN, W. D.: *Correlations of Physical Properties of Porous Media*, SPEJ Sept., 266

WICHMANN, P. A., et al: *Advances in Neutron Lifetime Logging*, (Tech. Art.) JPT Apr., 479

WILHELMI, B. and SOMERTON, W. H.: *Simultaneous Measurement of Pore and Elastic Properties of Rocks Under Triaxial Stress Conditions*, SPEJ Sept., 283

WILLHITE, G. P.: *Over-all Heat Transfer Coefficients in Steam and Hot Water Injection Wells*, (Tech. Art.) JPT May, 607

WILLHITE, G. P. and DIETRICH, W. K.: *Design Criteria for Completion of Steam Injection Wells*, (Tech. Art.) JPT Jan., 15; discussion, JPT June, 765

WILLHITE, G. P., et al: *Use of an Insulating Fluid for Casing Protection During Steam Injection*, (Tech. Art.) JPT Nov., 1453

WILLIAM, B. T., et al: *Deerfield Pilot Test of Recovery by Steam Drive*, JPT July, 956

WILLMON, G. J.: *A Study of Displacement Efficiency in the Redwater Field*, (Tech. Art.) JPT Apr., 449

WILMINGTON FIELD: *See* California

WILSON, G. J.: *Dog-Leg Control in Directionally Drilled Wells*, JPT Jan., 107

WILSON, J. H., et al: *Use of an Insulating Fluid for Casing Protection During Steam Injection*, (Tech. Art.) JPT Nov., 1453

WIRELINE: completion technique for sand control, (Tech. Art.) JPT June, 741

WITHERSPOON, P. A. and NEUMAN, S. P.: *Evaluating a Slightly Permeable Caprock in Aquifer Gas Storage: I. Caprock of Infinite Thickness*, JPT July, 949

WOMAN'S AUXILIARY OF AIME: case history of a new section, (Tech. Art.) JPT Mar., 363

WOODROW, J. M., et al: *Case History of Water Pressure Maintenance Operations in the McComb Unit*, (Tech. Art.) JPT Apr., 457

WORKOVERS: unsteady-state pressure analyses of buildup and falloff tests in reservoir diagnosis, (Tech. Art.) JPT July, 869

WYOMING: Teapot Dome: management of the naval petroleum reservoir, (Tech. Art.) JPT Mar., 297

Y

YANG, J. H. and GRAY, K. E.: *Single-Blow Bit-Tooth Impact Tests on Saturated Rocks Under Confining Pressure: II. Elevated Pore Pressure*, SPEJ Dec., 389

YOUMANS, A. H., et al: *Advances in Neutron Lifetime Logging*, (Tech. Art.) JPT Apr., 479

YOUNG, F. S., JR., and GRAY, K. E.: *Dynamic Filtration During Microbit Drilling*, JPT Sept., 1209

YOUNG, K. L.: *Effect of Assumptions Used to Calculate Bottom-Hole Pressures in Gas Wells*, JPT Apr., 547

Z

ZAKIN, J. L., et al: *Correlation of Drag Reduction With Modified Deborah Number for Dilute Polymer Solutions*, SPEJ Sept., 325